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ABSTRACT

Divided into five chapters, this user's manual is intended to assist local educators in the assessment of their career education programs. The first chapter discusses the purposes of evaluation. Chapter 2 provides a quick overview of the basic evaluation steps, while the remaining chapters provide the necessary details to implement these eleven steps. Chapter 3 focuses on the first three steps: (1) decide to conduct an evaluation; (2) select the evaluation coordinator and the evaluation committee; and (3) prepare an overview of current career education activities. In chapter 4, steps 4-8 are elaborated: (4) formulate evaluation questions; (5) identify sources of data; (6) select or identify instruments; (7) prepare a sampling plan; and (8) prepare and conduct data collection. In the last chapter, steps 9-11 are presented: (9) data tabulation and analysis; (10) review findings and make recommendations; and (11) disseminate report and implement recommendations. The majority of this document contains appended materials, including sample survey instruments, an annotated bibliography of published instruments, and a random number table. (A related document, CE 018 806, contains a detailed description of the instruments used to assess South Carolina's career education status. Another document, CE 018 807, interprets the career education needs assessment survey that was taken of a sample of South Carolina school students and school staff.) (BM)

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Methods of Evaluation and Career Education

A Users Manual for Local Education Agencies

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by

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Forward

"ME & C. E.," pronounced mē and c̄ - ē, is intended to be a user's manual for the evaluation of local Career Education activities. While ME literally stands for methods of evaluation, it figuratively stands for the user, and indicates the important relationship between the local education staff and their Career Education Program. Besides being instrumental in the ongoing operation of the Career Education Program, the Local Education Agency (LEA) must develop and implement their own evaluation procedures to assess the effectiveness of the C. E. programs underway. Only from a comprehensive review of the present status of Career Education can information be gathered, analyzed, and reported which will enable the LEA to make reasonable decisions concerning future Career Education activities, what direction those activities should take, and how much time, money, and resources will be allocated for that purpose.

This user's manual has as its primary purpose, the provision of South Carolina local education agencies with a cookbook procedure for the assessment of their Career Education Programs. Every attempt has been made to keep the procedures straightforward and uncomplicated. Accurate and appropriate methods are presented while avoiding whenever possible sophisticated or complicated statistical methodology.

Like any good cookbook, this manual intends to provide those step by step procedures, appropriate precautions, and related in-

formation to enable each LEA to successfully complete their Career Education assessment. Because different LEA's will have different tastes, appetites, and budgets, variations on the Career Education assessment "menu" have been provided. Naturally, like any good recipe, you may "season" these procedures to fit your own good taste.

On behalf of the Career Education Staff, I hope you find these recipes to your liking and satisfaction. We hope that you will share your successes with these recipes with us and others. Also, please tell us about any new or innovative variation you have tried; we are always interested in making additions and improvements to your "cookbook".

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CHAPTER 1

Why Evaluate?

Input for Decisionmaking

The evaluation of Career Education activities by local education agencies presupposes that assessment findings will result in action by local education administrators.

> Evaluation is not an end in itself. It can serve many purposes.... In all of these many uses, there are two common elements: (1) Evaluation is conducted for purposes of decision-making and, therefore, must be responsive to the needs of the decision makers; and (2) evaluation must be made against some framework, standards, or criteria. Evaluation is considered as part of the management of educational systems, and more particularly, part of the process of management of Career Education with the underlying purpose of improving program performance.[1]

A work session on evaluation procedures was conducted at the 1976 National Conference for State Directors/Coordinators of Career

Education. These directors, in addressing the question, "why evaluate?" suggested that the "purpose of evaluation is not to prove, but to improve. The ultimate worth of any evaluation in education is to be found in the benefits it offers to students."

For a statement on the importance of evaluation in the overall picture of Career Education implementation, one can look at the amount of funds recommended for use in that activity. The National Advisory Council for Career Education in their 1976 interim report recommended "that the Office of Education, state education agencies and local school districts set aside between five and ten percent of any allocated Career Education funds for assessment, evaluation, and dissemination of Career Education activities. Evidence that demonstrates the effectiveness of Career Education activities is not only urgently needed but is a responsibility that professionals have to the public that makes possible such educational endeavors. Assessment and evaluation procedures at the local level may well incorporate a variety of approaches including norm and criterion behaviors. The council believes that both process and product evaluation efforts are highly important. The need for long range, longitudinal evaluation designs must not prevent educational professionals from engaging in meaningful short term evaluation efforts.[2]

South Carolina agrees with the National Advisory Council's advice and concurs with the recommendations of the state Career Education director's emphasis on evaluation as a stimulant to action.

Accountability

Dr. Kenneth B. Hoyt is presently Director of the Office of Career Education, United States Office of Education, and has been Career Education's single strongest supporter since the concept was unfolded in 1971 by then Commissioner of Education, Sidney P. Marland. Dr. Hoyt has authored a monograph titled, "Perspective on the problem of evaluation in Career Education" which discusses several of the current difficulties in assessing Career Education efforts. Hoyt begins by discussing the current trend to hold educational programs accountable for their products.

> The age of accountability has definitely come to American education. In general, the accountability emphasis has called on all parts of American education to answer two basic questions: (a) What have you done? (this is the question of process) and (b) What benefits have resulted from your actions? (this is the question of product).[3]

While accepting the need for accountability in Career Education, Hoyt notes the inherent difficulty of providing product evaluation in Career Education. Career Education goals are typically "stated in terms that reflect expected behaviors of pupils once they have become

adults and left the formal system of education. Such goals, therefore, are ones that defy evaluation prior to the time a generation of pupils has passed through the educational system... This makes it doubly important that careful attention be paid to both process goals and short-term product goals of Career Education."[4]

"What's in it for Me?"

The local education administrator who does not consider the real world motives of individuals can make serious mistakes when considering the question, why evaluate? Hoyt looks at the problem of evaluative criteria in a candid manner.

It would be ideal if everyone's personal values were so altruistic in nature that simply seeing positive student outcomes was a sufficient source of motivation for a particular person to continue his/her efforts. Unfortunately, we do not live in an "ideal world", but rather in a world of human beings whose motivations, while sometimes based on altruism, are almost always also based on some kind of self-serving interest. Of all the "actors" in Career Education, it may well be true that the only ones who will find student benefits alone a sufficient reason for continuing their enthusiastic involvement in the effort are parents. For most other persons, Career Education efforts, no matter how important or desirable they may appear to be, are not seen as the primary reason why that person is employed. That is, the teacher's main job is imparting substantive content to students; the counselor's main job is improving student self-understanding and decision-making; the administrator's main job is administration; and

the businessperson's main job is the particular business or occupation in which he/she is engaged. Yet, Career Education asks each of these persons to play a key and crucial role in the implementation of Career Education. For each to volunteer to play such a role in an enthusiastic manner, and on a continuing basis, demands that they see some benefits accruing to themselves as well as to students. Such perceived benefits become, in effect, another set of criteria by which each evaluates the efficacy of Career Education--and so their personal commitment to the concept.

Classroom teachers, at the K-12 level, have pictured such benefits to themselves as including: (a) a way of motivating students to learn subject matter; (b) a way for teachers, as well as students, to learn new and valuable things about occupations and about their community; (c) a way of finding and utilizing community resources so that the teacher does not have to depend completely on his/her knowledge in order to present information to students; (d) a way of helping teachers better understand their students; and (e) a way of introducing sufficient variety into the teaching/learning process so that teaching becomes more interesting for the teacher.

Counselors have seen Career Education as a vehicle for: (a) helping to attain the goals of career guidance (which the counselor recognizes he/she cannot do alone); (b) gaining greater acceptance for counselors among teachers and community persons; and

(c) gaining more community support for the career development process.

Members of the business-labor-industry community have viewed Career Education as holding positive potential for: (a) gaining greater understanding and acceptance of the American economic system; (b) producing students who, when they leave the educational system, are better prepared to enter and become successful in the world of paid employment; and (c) restoring a positive attitude toward work on the part of both youth and adults in the community.

School administrators and school board members have viewed Career Education as an effort which, if successful, will: (a) serve as a vehicle for improving basic academic skills of students; (b) provide a means of making education more cost-effective through greater utilization of community resources; and (c) gain greater community understanding and support for education, thus making it easier to gain financial support for education.

Vocational educators have viewed Career Education as a means for gaining greater community understanding and support for their efforts as well as a means of attracting more able students.

Liberal arts educators, on the other hand, have viewed Career Education as a rationale for justifying the key role the liberal arts play in providing students with the adaptability skills needed to change with changes in the broader society as well as a means of helping prepare students for productive use of leisure time.

It is neither proper nor feasible to build formal evaluation of the Career Education effort around the wide variety of hopes and

expectations listed above. Yet, in an informal way, there seems little doubt but that particular individuals will be making their own informal evaluations of Career Education in accordance with some of these expectations. Those persons interested in and concerned about the importance of evaluating Career Education cannot ignore such expectations--even though they will seldom find opportunity to include them in formal evaluation designs. It may well be that, because Career Education seeks to be infused into all programs rather than added on as a new, separate program, because it does not seek new kinds of specialists at the building level, and because it does not ask for large amounts of dollars, the long-run future of Career Education may, operationally, depend relatively more on these kinds of personalized, informal criteria than the more formal evaluation efforts based strictly on either process or product.[5]

Hoyt's comments on the self-interest of individuals whose actions impinge on Career Education activities should be given serious consideration by any researcher attempting to evaluate the success or status of a Career Education program. Hoyt's view highlights the importance of attitudes toward Career Education as an integral component of the success or failure of the Career Education concept. He further notes that the school, home, and community are the three primary forces affecting and affected by the implementation of Career Education concepts in the school. It is Hoyt's view that these three populations must be included in an effective process evaluation.

The personalized and informal criteria to which Hoyt refers can

only be given adequate consideration by the LEA. This can and should be done during the implementation of the local assessment process.

Increased Knowledge

Just as Hoyt spoke of the informal criteria used by various groups to provide their individual assessment of Career Education, one can also speak of the side-effects derived from the evaluation process. These side-effects if beneficial may be given added emphasis by the LEA and themselves be used to serve as an aid in the achievement of Career Education goals. These beneficial side-effects fall primarily into two categories: (a) Career Education awareness and (b) Career Education knowledge.

Awareness -- Students, teachers, counselors, administrators, parents, and members of the business-labor-industry community can be exposed to Career Education goals and methods through their involvement in the Career Education evaluation process. This exposure to questionnaires, surveys, tests or evaluation committees broadens Career Education awareness and stimulates thinking concerning the career development process.

Knowledge -- Students are the primary audience for providing increased Career Education knowledge. For many academically oriented students, tests, questionnaires, and evaluations stimulate their competitive spirits and encourage their learning of new knowledge. For those non-academically inclined, they find that much of the career

knowledge being tested is about the real world, jobs, money, the community environment, things they may have learned about outside school. Through this type of evaluation and exposure to career information, these students may also develop heightened interest in career learning.

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1. Evaluation and Educational Decision-Making: A Functional Guide to Evaluating Career Education Prepared for U. S. Department of Health, Education and Welfare, Office of Education by Development Associates, Inc. Washington, D. C. September 1975, page 13.

2. Developing Adequate Evaluation Procedures: A report compiled as a result of a special interest group session at the "National Conference for State Directors of Career Education" May 2, 3, 4, 1976, Phoenix, Arizona. Working Draft, Office of Career Education, Washington, D. C. 1977.

3. Hoyt, Kenneth B., Monographs on Career Education: Perspectives on the Problem of Evaluation in Career Education, U. S. Department of Health, Education, and Welfare, Office of Education, 1976.

4. Ibid.

5. Ibid.

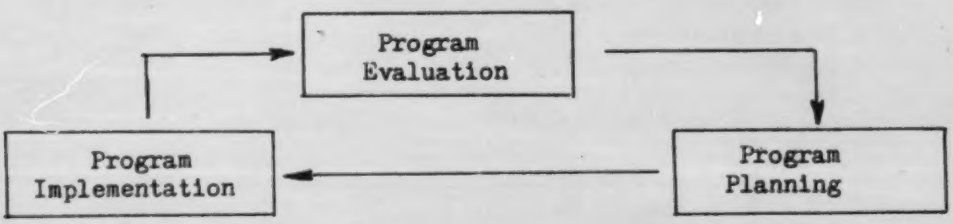
CHAPTER 2

Establish The Game Plan

Just as a good coach establishes the strategy for offensive and defensive play, the local education agency must plan their overall evaluation strategy.

The following steps are provided to help local school districts organize a systematic approach for Career Education assessment.

The evaluation process should be action-oriented. The primary purpose of an evaluation is to produce information useful to decision-makers. Decisions are made concerning programs, program changes are implemented and these changes are subjected to evaluation. Ideally a continuous loop is formed with evaluation being the key step in the cyclical reformulation of program implementation.



Step One: Decide to conduct an evaluation.

Think about it! Evaluations are not free -- they consume resources like any other activity. You must be convinced that evaluation activities are worth the expense. Will the evaluation process aid future decision-making? Is evaluation required for outside funding? Are staff members available to participate in the assessment process?

You've decided to conduct an evaluation? O. K., proceed to step 2.

Step Two: Select the evaluation coordinator and the evaluation committee.

Select the evaluation coordinator. If your school system has a Career Education Coordinator, that person is the likely candidate. Otherwise, school counselors, because of their role as facilitator in the career decision making processes of students, are likely prospects to consider. Actually, the coordinator might be any professional staff member who has the ability to organize and cooperate with other personnel and an understanding and strong interest in Career Education. By following the procedures in this manual, the coordinator will be able to complete the evaluation process without a specialized evaluation background or statistical expertise.

Select the evaluation committee. An evaluation produces data. But the data can only be made meaningful by interpreting it in light of the goals and priorities of the community and local education agency. In addition to school personnel, the committee should include persons who represent business, labor and the professions as well as parents and students. For the committee to adequately perform its assigned tasks, its size should not be unwieldy, six to twelve persons would be an appropriate number. The Career Education Staff may be considered an ex-oficio member in that the state consultants will be available for advice and consultation, if needed.

Step Three: Prepare overview of current Career Education activities.

The first task the evaluation committee should undertake, under the direction of the coordinator, is the preparation of a program overview. This overview is a relatively brief description of the current state of Career Education in the school district. This forms the basis for evaluation and is useful for public information purposes and future planning.

Step Four: Formulate evaluation questions.

Evaluation questions should address the areas of program objectives, program activities, and program management. Both descriptive and explanatory types of questions should be asked.

Step Five: Identify sources of data.

The evaluation committee should meet to consider the data sources to be used in answering the evaluation questions. Likely sources are those persons affected by the Career Education Program as well as those who cause the effects. Many varied sources are available and each should be considered in light of its relative value, ease of collection, and other pertinent facts.

Step Six: Select or develop instruments.

The main concern in selecting instruments is to choose those which answer as directly as possible the evaluation questions. Do not be unduly influenced by sophisticated instruments, fancy statistical jargon, or elaborate interpretation systems. Amazingly,

a direct question will often solicit the most accurate response! Types of instruments you will want to consider include standardized tests and questionnaires, locally developed tests and questionnaires; observation instruments, interview schedules, document review forms, and staff reporting forms.

Step Seven: Prepare a sampling plan.

Because of the near impossibility of testing every student, faculty member and community resident, a sampling plan must be established. The basic idea is to select a sample which is representative of the total group under consideration.

Step Eight: Prepare and conduct data collection.

The various data gathering tasks must be specified, personnel must be assigned to conduct them, and a time table for implementing the collection must be completed before the actual collection process begins. While you may wish for a smooth data collection procedure, some problems invariably occur; follow your plans as closely as possible but record any modifications or changes for later review during data analysis.

Step Nine: Data tabulation and analysis.

It is impossible to make program decisions from raw data. The data must be collected into more manageable forms which provide suitable information to answer the evaluation questions. This process usually requires tabulation of the data into more concise categories

followed by the application of suitable analysis techniques. It is important to remember that these techniques need not be complicated to provide effective results; sums, averages, and percentages are easily understood by all, and they clearly display the required information.

Step Ten: Review findings and make recommendations.

The evaluation committee should review the findings and make their recommendations for action. Once all the possible implications of the findings have been discussed, a final report with summary data and recommended action should be drafted and distributed.

Step Eleven: Implement recommendations and disseminate results.

An expenditure of time, money and energy were made to provide the information and recommendations the LEA now possesses. Make the most of it. Follow those recommendations which will improve the Career Education Program, improve the product, and streamline the process. Make cost-effective changes and direct faculty and staff energy in the most fruitful directions. When appropriate, use the findings to advertise and stimulate the growth of your Career Education Program through school and community media.

Chapter Two has provided an overview of the evaluation process. In the chapters which follow, the reader will be led through the steps as they are applied to the local evaluation of Career Education.

This manual will not make all the decisions needed for an effective local assessment, but it does provide a programmed path to follow for the recently recruited evaluation coordinator. The pathway may not be perfect but, if the authors' intent is met, the coordinator will easily be able to follow it. Some of the procedures recommended may be decryed as overly simplistic by those researchers used to rigidly controlled procedures and sophisticated experimental models. Our response to this criticism is that successful completion of the task is preferred to providing challenging feats of statistical engineering productive of incomprehensible results!

Newly nominated coordinators, the balance of this manual is your "cookbook for Career Education evaluation." We hope you find it direct and to the point in meeting your assigned task.

Shall we continue?

CHAPTER 3

Program Initiation

In Chapter Two, a quick overview of the basic evaluation steps was provided. In this and succeeding chapters, these steps will be elaborated upon to provide the details necessary to implement the assessment procedure correctly.

Step 1 - Decide to Conduct an Evaluation

The school district nominated you to be the Career Education assessment coordinator. You graciously accepted the task, so the decision to conduct the evaluation has already been made, right? Well no, not necessarily. Yes, the decision has been made, but was much thought given to costs of the evaluation? A proper evaluation will consume both staff time and financial resources.

At the start, it is a good idea for the assessment coordinator to review the proposed project, develop an outline of the activities to be conducted and their cost, and review the proposal with the local educational administration. This early contact should be the basis for dropping the evaluation process or confirming the commitment to the assessment. The approximate degree of commitment should also be discussed at this time. How much student time, teacher time, counselor time, administrator time, or clerical staff time may be consumed in the assessment process? What amount of funds will be available for testing supplies, data processing, and analysis? Will funds be available for communications

such as telephone, mailing costs, publication of materials?

Checkpoint 1: You've reviewed the assessment procedures with administration. Is assessment go or no go? If go, what level of commitment? Faculty and staff time? Monetary support?

Step 2. Select the evaluation coordinator and the evaluation committee.

You were selected as the evaluation coordinator which should indicate that you qualified according to the following criteria. (1) You are interested in, and committed to the Career Education concept. (2) You are part of the permanent local education agency staff and familiar with the schools, activities, and programs in the district. (3) You have been successful in coordinating previous activities involving multiple tasks and motivation of other personnel, and (4) you understand the utility of effective information feedback for instructional improvement.

To a great extent the ease or difficulty experienced in completing the assessment will depend upon the extent to which you select a capable and energetic evaluation committee. With a well selected committee, you serve as a coordinator. With a poorly selected group, you become a workhorse, doing a majority of the tasks yourself. I think you'll agree that the coordinator role is preferable!

The evaluation committee should have members representative of school and community. Those members from the school staff pro-

vide the group with knowledge of existing school programs and practice. A senior high school student might be considered as a representative of the student body, while younger students can become involved later in data collection activities. Representatives from the work world, business-labor-professionals, and parents should be amply represented. These representative committee members should be as knowledgeable of community affairs, both of a civic or business nature, as possible. These people, of whom you will be requesting participation, will come with knowledge of community needs, as well as community support. The more active these people are in other community organizations, the more active and beneficial they are likely to be in your assessment program. Also, each active person will most likely be representative of several contingencies in the community. If a Career Education advisory committee exists, by all means plan on making one of its members an assessment committee member.

To maintain a manageable and productive committee, a group of six to twelve members is best. This group is small enough to be effective as a total group, but also large enough to break into two or three sub-committees to complete assigned tasks.

While the group you select as evaluation committee members will be knowledgeable, capable and intelligent people, it is highly unlikely that they will have participated in an evaluation program before. Therefore, it is imperative that you, the coordinator, provide firm and capable guidance throughout the duration of committee operation. This begins during the committee recruitment process.

Recruit evaluation committee members

To uncover and solicit potential committee members, the following sequence is offered:

1. Solicit committee recommendations from students, faculty, staff, friends, etc.

2. From the various nominations prioritize the list as to potential contributions. We recommend that you don't do this in writing.

3. Draft a letter such as that in figure 3-1, to be sent to each first choice member. This letter should be personally signed by one of the highest level administrators in the school system.

4. Personally follow-up each letter request with your personal request (by telephone or personal contact) and a brief explanation of the scope of service requested.

5. Repeat the letter-contact process til a sufficiently large and diversified group is formed.

Checkpoint 2: Review your newly formed committee. Are they a capable and willing group? Are they representative of local interest groups (school, community, social, ethnic)? Did you inform them of their expected duties?

Step 3: Prepare overview of current Career Education activities.

The overview should be a brief statement of the purposes of the LEA's Career Education effort and its current level of implementation. From this overview will come the focus for the planning and implementa-

tion of the assessment process.

A subcommittee of the evaluation committee composed of school staff members and advisory counsel members should be directed towards the accomplishment of this task, based upon their previous awareness of Career Education efforts in the district. The overview developed should not be lengthy, about six to eight double-spaced pages should suffice. It should give the reader an overview of past C.E. activity. It can be conceived as a summary which might be read by the school superintendent, the general public, and other interested groups, but more immediately it will be used as a planning tool for the evaluation committee. It most probably will include the following information:

Scope of C.E. - proportion of schools and students, curriculum areas, and grade levels presently served by Career Education activities.

Program Origin - background of C. E. efforts.

Goals and Objectives - present statement of district goals and objectives related to Career Education implementation. Also, implementation priorities, if given.

Major Activities - current Career Education activities showing staff and participant involvement; number of students and participants by subgroups such as school and grade level.

Funding and expenses - identification of source(s) of funding and amounts; major non-cash contributions; major types and amounts of expenditures to provide an understanding of the size and emphasis of current activity.

Checkpoint 3: Review the program overview. Does it cover the five key points described above? Are there any local and unique factors which have been omitted from the report? Is the report accurate and readable? Is it sufficiently brief, four to six pages?

CHAPTER 4

Defining the Evaluation

This chapter will present the steps which formulate the design or definition phase of the Career Education assessment process.

Step 4 - Formulate Evaluation questions.

The overview of Career Education activity provided in Step 3 should provide the basis for formulating appropriate evaluation questions. The review and discussion of the overview is the first major task requiring the total evaluation committee.

A comprehensive assessment of Career Education may be expected to answer at least three types of questions:

A. Program Review - Do you have a Career Education Program? How good is it? Is it properly organized? Structured? Is it being implemented and managed properly?

B. Product Review - Are students equipped with essential work attitudes, values, and skills?

C. Process Review - Are you providing adequate Career Education opportunities? Are community employers aware, involved, and committed to Career Education goals? Are parents aware, involved, and committed to C.E.? What C.E. understanding and commitment does the educational staff have?

The number of questions addressed will vary depending upon the scope of the evaluation. Generally, the scope of the evaluation de-

pends upon the nature of the program and such limitations as time, funding, and resources. Regardless of the scope of the evaluation, choice of evaluation questions should be made only after due consideration is given to need and priorities. The following questions concerning priorities should be addressed by the members of the evaluation committee.

1. What individuals or groups are most concerned with the evaluation and its results? What priorities should be established among them?
2. What would these people like to know; which questions are most important to them?
3. Why do they desire to know? Funding requirements? Program change? Self-improvement?
4. How easily can data be collected to answer the questions?
5. What are the major constraints on the evaluation? Are costs, time, and staff in short supply?

Subjecting the evaluation questions to the above analysis should provide a very efficient method for selecting and prioritizing those questions to be answered during the evaluation process.

As stated before, local factors will determine how many questions will be addressed. Before narrowing down the list, the committee should consider a broad aspect of ideas based on their personal viewpoint as well as the stated goals and viewpoints of organizations which they represent.

While this manual cannot anticipate the local questions your committee might address itself to, it can offer a set of questions for your consideration and possible inclusion. By all means, subject these questions to the same close scrutiny that you will apply to those submitted by committee members.

Product Review - First let's look at questions relative to "Product." By this we mean questions concerning student acquisition of Career Education knowledge, attitudes, and skills. For in education, the final 'product' is the "student properly equipped for life."

The South Carolina Career Education approach, as stated in a 1975 Department of Education position paper, incorporates seven basic elements into school curricula. Each element raises consequent evaluation questions which the state hopes to address at the state level, but which are just as relevant at the local level. The seven basic elements and some relevant evaluation questions are:

1. Self-knowledge. Do students have a good grasp of "Who am I"? Are students aware of their capabilities or limitations, physically, socially, and academically? Are students aware of their personal values, and the value systems they apply to life? How well do students understand the relationship between their interests, abilities and attitudes and their occupational aspirations?
2. Decision-making skills. Can students apply rational thinking to the decision-making process? Do students know that

career decisions should be correlated with personal life goals and values? Do students gather data and use appropriate information sources prior to making decisions? Are students aware of the many sources of information available to them? Do students develop the confidence to make decisions, or do they let decisions be made for them?

3. Career Awareness. Do students know the tasks and duties comprising their immediate family members' occupations? Do students know the social ranking of occupations according to difficulty of job entry, economic reward, and occupational prestige? Are students aware of a dozen or more occupations that may satisfy their interests and abilities?

4. Economic Awareness. Do students understand the capitalistic economic system under which our country operates? Are students knowledgeable in financial planning; can they budget their own or their family's finances? Are students wise consumers; can they make knowledgeable choices between goods based on value, price, financing, life expectancy, durability, etc.

5. Educational Awareness. Do students see the necessity of school as one of the 'jobs' in their career progression? Do students know the educational requirements of common community occupations? Can students relate academic skills

to typical work skills? Have students considered the educational sequence necessary for occupations in their area of interest?

6. Attitudes and Appreciations. Have students acquired healthy work attitudes and habits? Do students appreciate the dignity and social value of work? Have students recognized the vital importance of a cooperative spirit in attaining career success?
7. Social Awareness. Can students accept constructive criticism and follow directions from those in supervisory capacities? Do students accept and warrant increasing responsibility? How well do students understand the need for cooperation in the completion of tasks? Do students see the relationship between customs, traditions and social values and the work environment?

The above series of questions reflect the South Carolina State Department of Education's concerns regarding students' Career Education awarenesses. The questions posed are certainly not all inclusive, but rather, they attempt to highlight the seven over-arching basic questions. These basic elements of Career Education are also in the mainstream of national goals and concerns relating student skills to career awarenesses. Thus, state and national, as well as local interest exists in answering these and related questions.

Process Review - The above discussion dealt with student outcomes

(i.e. their abilities, attitudes, skills, etc.), process review questions are possed to examine what visable actions are taking place in the school district to promote the desired product outcomes. A convenient way to organize these evaluation questions would be to group them according to the key area in which activities occur, school, home, and community.

Evaluation questions relating to the school environment might include:

1. Do classroom teachers understand and agree with the objectives of Career Education?
2. Are classroom teachers implementing Career Education activities in their classes?
3. Are Career Education materials and resources available in the schools?
4. Are community resources used to support the school district's Career Education Program?
5. In what schools, classes, is Career Education being used to best advantage?
6. Is Career Education being used to enhance subject and curriculum decisions?
7. To what extent are guidance counselors supporting and promoting Career Education?

Evaluation questions relating to the home environment might include:

1. Do family members expose children to their job function, duties and requirements?
2. Are parents familiar with the school's Career Education Program? Are they accepting and supportive of its goals?
3. How much career information and guidance are provided at home?
4. What job skills are taught to students at home?
5. What work tasks and responsibilities are students expected to assume at home? Do they aid in the student's career development?
6. Do parents want the schools to teach job attitudes? Consumer skills? Vocational skills?
7. Would parents be willing to teach students more occupationally related skills at home, if guided by prepared materials and given support from school staff?

Evaluation questions relating to the community environment might include:

1. Are members of the business-labor-professional community familiar with the school's Career Education Program? Are they accepting and supportive of its goals?
2. Are members of the business-labor-professional community willing to offer a limited amount of their time to aid the school districts'Career Education effort? Are they willing to allow field trips or individual visits to these places

of business? What percentage of those willing to help, have actually done so?

3. In what ways have community members been most effective in promoting the accomplishment of Career Education objectives?
4. What long standing activities have community and civic groups provided which meet Career Education goals? Is the school involved in promoting these activities?

Program Review - A third major consideration for the evaluation committee is to voice those questions which address the school districts overall attentativeness to Career Education. Questions which bring this area into focus might include:

1. Does the district have a published statement of commitment to achieving Career Education goals?
2. Is someone assigned district wide responsibility for coordinating and facilitating Career Education activities?
3. Does a Career Education advisory committee exist? Is it active?
4. Does the district have a compiled list of speakers and resources available for classroom visits or field trips?
5. Has the district organized and offered in-service education for faculty which features Career Education?
6. Does the district communicate regionally, or at the state and national level with other agencies promoting Career Education?

7. What incentives are provided to encourage student, teacher, parent, or community involvement in Career Education?
8. What public relations activities are used to promote Career Education?

As the evaluation coordinator, you will want to consider the above evaluation questions in light of your own districts' needs and activities. You may decide not to present these questions to the evaluation committee. It may be more informative and in the long run more valuable for the committee to start with a 'clean slate' and develop a totally original set of assessment questions. As the group leader you can bring the group's attention to any area you think they have neglected by later making suggestions based on this manual.

Once the initial set of questions has been listed, it is useful to have the committee review them for appropriateness and to determine priorities among them. After completing this review, the committee is ready to address the next step -- specifying data sources.

Checkpoint 4: Look at the set of evaluation questions. Was the evaluation committee responsible for their formulation? Do they address issues that users of Career Education want to find answers for? Can answers to these questions be reasonably expected to result from the evaluation? At this point the evaluation questions should be firmed up, but not considered rigid requirements. Their number, form, or exact statement may need slight modification as a result of subsequent steps in the evaluation process.

Step Five: Identify sources of data.

Once the evaluation committee has completed the harder task of selecting evaluation questions, little time will be needed for them to list the possible data sources to answer each question. This step sets the direction for data collection, provides logical division of labor for data collection, and serves as a check to be sure that a source of information does exist for each evaluation question being posed. The same data source will be used for several evaluation questions, and many evaluation questions will have multiple sources of data, but every question to be answered must have at least one useable source of data. Figure 4-1 shows a partial list of questions and data sources.

Checkpoint 5: Do you have at least one valid source of data for each evaluation question?

Step Six: Select or develop instruments

In most instances, it will be wise for the evaluation committee to rely heavily upon the selection aspect of this step and develop as few new items as possible. This not only saves time and effort but can also be expected to provide more accurate results. While questionnaires are very easy to create, even here, multiple meanings, unclear directions, or other unnoticed errors can result in no data being collected, or even worse, undetected errors or wrong interpretation by the subject can produce mis-

Figure 4-1. Source of data for Career Education Evaluation.

Evaluation Questions	Data Source	Instrument
1. Have students developed an awareness of our capitalistic economic system?	Student,** teachers, parents, general community.	
2. What degree of career awareness do our graduating seniors possess?	Student,** counselors, teachers.	
3. How much career information and guidance are provided at home?	Parents,** students*	
4. Are business-labor-professional community members willing to give time for career education?	Citizens,** corporation, community organizations.	

** indicates most direct and preferred source

* indicates second choice but also very valuable

leading or incorrect information. The pitfalls are many in the area of instrument construction, the rewards are infrequent.

Unfortunately, until very recently, the area of career education evaluation has had few instruments available to assess the wide variety of measures needing evaluation. Only lately has the nationwide interest in career education caused a number of researcher and test publishers to correct this shortage. Many newly developed instruments are appearing rapidly, which the career education evaluator may choose from. Every product has its price, however, and ranging from several cents to a dollar or more per student, these evaluation instruments can easily unbalance the evaluation budget. While many commercially available instruments will be well worth their expense in terms of reliable data, useful information, and normative information, the evaluation committee will want to be sure that the most appropriate instruments are chosen to answer the highest priority questions. Where lower priorities are encountered, it may be justified to forego the expense of a commercial instrument or test battery and make use of the several uncopyrighted instruments produced by Career Education projects, state universities, and state department of educations.

Types of data collection instruments recommended for career education evaluation by local districts include (1) standardized tests and questionnaires, (2) specially developed tests or questionnaires, (3) interview schedules, and (4) staff reporting forms.

Let's spend a few minutes considering each of these data collection devices.

Standardized tests - These tests have several major advantages for the potential user. (1) They are "standardized" in that all possible factors affecting the results of the test are kept constant except that area under consideration by the test. For example, a reading speed and comprehension test is standardized when all students are administered the test under the same conditions; quiet studious atmosphere, correct pencils, paper, directions conscientiously given in a prescribed manner, time limits strictly adhered to, age range of students, time of year test administered; all of these elements and more are established during the standardization process. (2) These tests are usually also associated with large scale testing and establishment of normative data. This normative data is extremely useful because it provides a basis of comparison. The norms establish group averages and a range of scores for several major groups of subjects who have previously taken the exam. The evaluator can then decide what it means if his group is above, below, or on a par with a particular norm group. (3) Commercially available standardized tests have typically been subjected to a rigorous test development process including test construction, pilot testing, and review which establish the validity, reliability, readability, and appropriateness of that particular instrument. These areas are normally well covered and documented before publication, then periodically reviewed and updated thereafter, and (4) Answers

are normally provided via a users guide or test manual as to what the test scores mean. It serves no purpose to know that 80% of the students scored at the 90th percentile or above, or that Julie Dixon had a score of 62 on the self-awareness scale. The real value of such scores comes when they are interpreted in the light of other relevant facts and figures.

Questionnaires - Whereas tests are effective instruments in assessing subject's knowledge, questionnaires are most effective in soliciting personal points of view, thoughts, ideas, and perceptions. The questionnaire format is useful for gaining a large variety of information quickly. Since information sought is not usually of an individual nature, and since subjects will not be compared to one another, the depth of investigation normally encountered in the test is not required of the questionnaire, hence, questionnaires can more quickly collect information over large areas of interest. The questionnaire is probably the most frequent locally developed instrument. Decide what information you want to know -- translate into a question -- ask it. What could be more simple or straightforward? Unfortunately this simplicity precludes most users from rigorously developing questionnaires with any thought given to the reliability or validity of the data. Since you will undoubtedly find the questionnaire a very useful part of your evaluation, let's take a moment to review several basic but very important rules.

The primary rules are:

The questions should be simple and precise. Perhaps the most common difficulty in question construction is the combination into one question of what should be two or more questions. For example, if program personnel wish to ascertain how many of the students in a ninth grade English class that went on a particular field trip wrote an essay about a particular field trip, several short questions are necessary. It is not enough to ask: "Did you write an essay on your field trip?" A negative answer, of course, could mean that he did not go on the field trip or that he went on the field trip but did not write an essay. The first question should be: "Did you go on a field trip to X?"

The questions should be understandable. The words and concepts should be readily understood by the reader. For student questionnaires that means vocabulary appropriate to the grade level. It also means avoidance of ambiguous phrases. For example, if the need is to know how much time a counselor spent in career counseling, it is crucial that all recipients use the same definition of the concept "career counseling." If there is doubt, the question should be broken into various components.

The criteria for providing the response should be clear. At times there are two or more perfectly logical ways to answer a question. For example, depending on precise phrasing, three "correct" answers might be given to a question relating to the number of students seen

by a counselor who had interviewed five students, three of them twice: Total interviews -- 8; different students interviewed -- 5; students interviewed more than once -- 3. In designing the questionnaire, the first decision should be to determine precisely what information is needed and then to phrase the question to get that information.

The response should require as few words from the respondent as possible. Ideally, questions and possible answers can be so well thought out that the respondent will simply need to place a check mark in a designated square. This reduces responding and interpretation time. Often, however, this is not possible and open-ended questions are necessary. Where this is the case, tentative categories of responses should be prepared. In some cases, it may be concluded in advance that there will be so little commonality in responses that an item should be excluded.

Catch-all response items such as "other" should be avoided where possible. The existence of such items suggests that the question was not sufficiently thought out or that the information desired was not clear. Often such items produce no helpful information. There is also the danger that significant data will be lost because of the unspecific response.

Interview Schedules -- The interview schedule will seek to obtain much the same type of data as the questionnaire above. This type

of data collection instrument is most effective under the following situations.

When the respondents are unlikely to respond to any other method. This would most likely occur when the respondents are busy employers or community members with no direct ties to the school or interest in current school activities.

When the respondents are expected to have difficulty with a written form. This could occur with parent or community groups having a different ethnic background or a basic lack of literacy, such as might be encountered with transient farm labor groups.

When the purpose is to explore an area with the respondent. At times, the choice of subsequent questions are founded upon the answer to previous questions. A questionnaire can only handle this type of individualization to a limited degree. The interview schedule allows a wideranging search for information which is controlled by the interviewer.

When public relation communications are sought. The interview, besides collecting data, provides the excellent secondary benefit of communicating program information to the interviewee. Person to person contacts are one of the most effective methods of disseminating information. The language of communication is more likely to be simple and straightforward when people talk face to face; also the respondent can ask and receive answers to any unclear questions

or satisfy his curiosity concerning the program.

Staff Reporting Forms -- Two key participant groups in the career education program are teachers and counselors. Their knowledges and opinions can be gathered through tests and questionnaires, but detailed data as to number of student participants, dates and sites of field trips, guest speakers, etc., can best be gathered through staff reporting forms. The caution, of course, is not to cause anger by the needless, redundant, or excessively time consuming use of forms. The periodic data required for career education assessment may already be collected through existing paperwork, if not, it may be more acceptable to add to the existing forms rather than create additional forms. Be sure to collect necessary information, not merely interesting information. Not only do you consume staff time and risk their ill-humor but more information requires more evaluation committee time to collect and tabulate.

Instrument Selection -- With the above information as background, the formulated evaluation questions from Step Four, and the sources of data from Step Five, let's begin test selection through a matching process.

1. Using Appendix I, identify those instruments which provide answers to your evaluation questions. You will likely find that several instruments can answer a single question, and likewise several questions may be answered by a single instrument.

2. In Figure 4-1 you were shown a sample form for the alignment of data source with evaluation questions. This form can now be continued by adding the names of the instruments as you now identify them.
3. When this process is complete, you hopefully will have at least one instrument identified for each evaluation question. If you do not; if some of your questions do not have an instrument, you will either have to enlarge your search for an instrument (see Appendix II) or develop your own data collection instruments.
4. Assuming you have located or developed enough instruments, you should look at the minimum and maximum number of instruments required to complete the assessment. (a) Using as few as possible, how many instruments have you identified? Using as many as possible, how many? Keeping in mind that each unnecessary instrument is an added <u>burden</u> on the evaluation process.
   (b) This is the time to rethink your evaluation questions. Is it worth the added cost and time commitment to answer that mavrick evaluation question? Can the evaluation question be restructured in a manner such that the new question can be answered with an existing instrument or one less instrument? Now is the time for <u>selection</u>, careful selection, bringing the number of data collection instruments down to the minimum through thoughtful consideration which will simplify the duration of

the evaluation process.

(c) How many instruments do you have now? If you have been tight - fisted you may well have <u>fewer</u> than the minimum number first determined in Step 4 (a) above.

Congratulations! You're attention now, will be rewarded later.

Instrument Development -- You say there just wasn't any instrument to assess the community support for the unique home - industry program that has been developed in your elementary school? That's not so bad, this provides an excellent opportunity to develop an interview schedule. Once you have formulated the basic question sequence, you might decide to train a group of high school students in the proper procedure for administration and have them collect the data in the community. This, with concurrent news releases to the news media does wonders to promote public awareness of your program, and the high school students receive very real and valuable self-awareness and career awareness skills. When you look at what you can accomplish, you find that through a step in the evaluation process you've, (1) collected evaluation data, (2) informed a segment of the population as to a career education program, and (3) through purposeful planning you've provided career education experiences for a group of students! In our nations present concern for conservation, this multipurpose effort definitely makes sense. Receiving the most mileage for any given expenditure makes as much sense in the field of education as it does in the area of fuel conservation.

What is the procedure for instrument development? The procedure is much the same regardless of the format you develop, test, questionnaire, or survey. Follow the basic rules outlined previously as they were given for questionnaire construction. In developing your instrument, you undoubtedly will model yours after others you have seen. Use their style, format, and follow their lead in developing the general instructions for the test-taker. Your main concern is not to develop a new approach to testing, but to collect the data as efficiently as possible. If you find a <u>form</u> that you like all you need do is change the <u>content</u>.

When you have an instrument developed to your satisfaction, submit it to a 'jury of experts'. That is, have several people review it, members of the school staff or a sub-committee of the evaluation committee. This group should be primarily interested in the question, does this instrument measure what we expect it to measure? That is, does the 'student attitude questionnaire' actually ask the right questions to determine student attitudes? If you were pursuing student attitudes in the development of an actual instrument, you would naturally include members of the counseling staff as part of your 'jury of experts.' Include members most familiar with the <u>content</u> area. Once you and your subcommittee have reviewed the instrument to assure yourself of its 'face validity' (that's really what the 'jury of experts' is doing in reviewing the instrument), you should pilot test or field test the instrument. A dry run on a small sample of students, teachers, or whomever the instru-

ment is designed for, will give your newly developed instrument its first opportunity to prove its worth. If everything goes well, a few corrections or changes will be indicated, but the instrument will do what you wanted it too. That's basically it! You now have a tool to work with.

If you want to be a technocrat, you can check the reliability of your new instrument by administering the same instrument, to the same group of subjects, under the same testing conditions a few days later. If every student answers the same questions the same way and each have the same total score, you have a reliable instrument. Better instruments have rather high reliability; in other words, sameness, or consistency is a good feature for a test to have. If we were professional developers of tests, our technocrat friends would insist that we pursue the idea of test validity a step further. Besides face validity, the technocrat would want us to determine content validity and criterion validity. Content validity is judged by systematic examination of the test content to determine that it is a true representation of the area under study. Criterion validity means that the new instrument measures the same thing that an older valid and reliable test measures. This is difficult when no previous tests exist!

This manual suggests that for most program assessment purposes, the evaluator need not be overly concerned about these technical features, rather the important feature will be establishing normative groups, and interpreting the data given by the instrument. As an

example, if all the Trenton High School students rated themselves 'creative' on a self assessment we might give that fact little thought unless we saw that the other three high school groups in the district rated themselves as 'having little creativity'. These comparisons are one of the major ways we can use tests and instruments to provide information. Once we know Trenton students are creative, we can investigate why. Unless, of course, we did something to begin with to make them more creative, in which case we were trying to prove through the instrument, that we were successful in our efforts.

In our career education evaluation, we will be using instruments for both purposes: (1) investigations seeking answers to what we don't know as well as (2) proving that we have made accomplishments. The tests given this year to seek answers can be used next year as norms to provide us with a yardstick of progress. But to obtain this double benefit, accurate and complete records must be kept concerning instrument administration, the group administered the instrument, as well as their responses to the instrument. While it would not be feasible or expected that you retain the actual answer sheets or raw data, descriptive, summative data is essential.

Step Seven: Prepare a sampling plan

With the evaluation questions formed and the data collection instruments selected, the next task for the evaluation committee is to determine to whom the instruments will be administered. Reference to the source of data chart, figure 4-1, should tell you the groups you have decided to assess. The question now, is how many from each group should be assessed? One answer is to measure all members of the group. If you want to know the attitudes toward school of the third grade students, and you have 284 third grade students, simply assess all 284 and you have your answer. If you have 1026 third grade students, you can do the same thing. In this process you have assessed the total population of the districts' third grade students and you know what the 'attitudes toward school' are for this group (within the limits of accuracy of the instrument used). But, what if one or more students are not given the evaluation instrument? Then you have no longer assessed the population, but rather have assessed a sample of that population. If 10 of the 1026 students do not take the exam, how would this affect the results of the data collection? Essentially, no effect would be found. The information averaged from the 1016 students would be nearly identical to the information from the total group of 1026. However, what if only 513 of the 1026 took the test? There is now a distinct possibility of a significant difference between the scores of the sample of 513 and the population of 1026.

If the students selected for this sample of 513 happened to

all be members of the highest level reading groups in their respective schools and classes, our sample now has a bias which differs from the population. Since these students are probably brighter and more successful in school, we could expect that their 'attitude toward school' would be higher than that of the total third grade population. Does this mean that we will always have to assess nearly 100% of the population to answer questions about the total group? No, not if the technique of random sampling is applied to the process of sample selection. If random sampling techniques are properly adhered to, we can choose a 5% sample and still be confident that the answers we obtain based on this limited sample will vary little from the answers we would arrive at had the total group been tested.

Correct random sampling technique is the first and most important condition of most any statistical technique used to analyze the data collected from an evaluation instrument. While many statistical methods can be applied to the data after it has been collected, they all require that proper random sampling be done before data collection.

OK., if random sampling is so important, you say, how is it done? How to select a random sample is easy, but first let's discuss what it means to have a random sample. A truely random sample merely means that there are no differences between the members in the sample group and the members in the population due to any factor other than chance. We can use our hypothetical group of 1026

third graders as an example. If in fact there are exactly 513 boys and 513 girls that make up this population, a randomly selected sample of 100 students should be expected to have 50 boys and 50 girls. If we actually selected 100 students by a random method and produced a sample with 52 boys and 48 girls, the difference between these members and our expected 50-50 is due to chance. If we selected 100 students again from the same 1026 students we might end up with a sample of 49 boys and 51 girls. If we drew a total of 25 such samples of 100 students we would find that on the average our samples would have 50 boys and 50 girls. The slight differences due to chance cancelled each other out. That is why we, as well as our technocrat friends, must adhere closely to proper random selection techniques; over the long run, randomly drawn samples will provide an accurate reflection of any population measure we wish to evaluate.

That sounds great you say, but you don't want to draw 25 samples and average their results! You just want one sample, and how will you know how that sample differs from the population? The answer is, you won't know if it differs, or by how much, but, your best guess would be that it does not differ from the population! Our technocrat friends will be able to use the laws of probability and predict the chances that our sample differs from the population. We won't concern ourselves with that aspect now, but we have provided, through proper random selection, for accurate, detailed analysis at a later time if we chose to do so. But I repeat, for now, we are

concerned primarily with the fact that a random sample provides an unbiased indicator of the population. If a random sample of 100 students attending a military preparatory high school consisted of 100 boys and 0 girls, our best guess would be that there were no girls attending that school. Likewise if 98% of those same 100 boys predicted that they would complete college, we could safely assume that 98% of all students attending the preparatory school expect to complete college.

Realizing the importance of random sampling, let's now see how simple the process is. The single cardinal rule for selecting a random sample is that each member in the population should have an equal opportunity to be selected for the sample. This can only happen when members are selected by chance under conditions of equal probability. For example, if we wanted a 50% sample of our 1026 third graders, a perfectly correct random selection technique would be to decide that heads (or tails) would mean inclusion in the sample, then flip the coin for each of the 1026 students. The chance landing of the coin would determine what students were selected for the sample. Each student had an equal 50-50 chance (the same probability) of being selected. Completing this process we might choose heads to be the side for inclusion in the sample, flip it 1026 times and come up with heads 506 times. This is very close to the 50% sample we wanted but does not give us the exact number, 513, that we wanted. Another problem with the coin toss selection enters when we want a 10% sample. There are no 10 headed coins!

The best way to solve both of these problems is to make use of a random number table in our selection process.

Appendix III contains a random number table. This table can be used repeatedly to provide random sample selection as long as a different starting point is used each time. Here are the steps for the proper use of the random number table:

1. Consecutively number every member of the population starting with number 1.
2. Determine the size of the population -- if there are 92 subjects, 920, or 9,204, you will need respectively, two, three, or four digit random numbers. You must always use the same number of digits from the random number table as are in the largest number of the population.
3. Determine a starting point in the table -- close your eyes, wave your finger a couple of times, and plop it down on the page. This is where you begin.
4. Systematically progress through the table -- you may move in any direction, up and down, or back and forth across rows. The numbers you draw from the table refer to the subject numbers of the population you have selected for your sample.
5. Ignore any number not in the population -- you may skip over any number not a part of the sample. If in drawing a sample from a population of 92 students, you encountered the random number 97, merely skip over it and continue.

6. Ignore any number already selected for inclusion in the sample. Skip over the number and continue.
7. The selection process continues until the desired sample size is drawn.
8. If you reach the end of the table, you may randomly select a new starting point and continue.

Now that we have a sampling method to fit all situations, the next question to answer is how large a sample do we want? The larger the sample, the more accurate it will be. But large samples take more time, and cost more money to collect than small samples. The following guidelines should be used to establish minimum sample sizes:

1) never use a sample less than 25.
2) Select at least a 10% sample from the first 500 in the population.
3) Select at least 5% of the next 2000 in the population.
4) Select at least 2% of the population beyond 2500.

As an example, a minimum sample of 5,000 high school juniors would be

10% of 500 = 50
5% of 2000 = 100
2% of 2500 = 50
200 total sample

Thus our minimum sample, <u>randomly drawn</u>, would be 200 students.

This random selection process with minimum sample size is un-

fortunately often disregarded by evaluators because it is inconvenient to randomly select subjects. To obtain a random selection of 80 students from our hypothetical 1026 third graders would most likely require 2 to 4 students each, from 25 to 30 different classrooms, in several different schools. Many evaluators, because of the difficulty, randomly select whole classes of students as samples. Now, however, it is the class not the individual student which becomes the randomly selected element. According to our rule, we should select a minimum sample of 25 which would mean assessing 25 classes, or approximately 625 students! Very seldom are samples with this many classes drawn according to proper random sampling rules.

Another problem, encountered on occasion, is the inability to properly identify the population from which a random sample will be drawn. For example, it would be difficult to identify all the members from 17 to 75 in the school district who would be the subjects of a community questionnaire. Voter registration records contain a segment of this group age 18 and above, but would only include those civic-minded enough to have registered to vote. The local telephone book will contain a listing for most households, however, some homes do not have telephones, while others maintain an unlisted number. Beyond this, the telephone is normally listed in one name, while the household may have several members which fit the community member status. How then can the evaluation committee be expected to properly follow the rules for random selection under

these difficult conditions?

The answer is that the committee can no longer apply the randomization process to the population, but may still apply it to a subset of the population. To select a sample for the administration of a community survey, the committee may decide that the telephone directory white pages provide the best overall population subset for use in the evaluation. The committee must recognize this as the subset used and record it as a limitation of the evaluation, and also consider what biases may enter the data as a result of this selection. Once these facts have been properly recorded, the new population may have random sampling techniques applied to produce a sufficiently large sample. How large a sample should be selected? Using the rules given, we had to know the number in the population. In the case of our community survey, it would be permissible to estimate this figure from census data. Let's assume that a community had 200,000 residents of which at least 100,000 could be expected to be over 17 years of age. If we desired a 2% sample of this group, this would require that 2000 individuals be given questionnaires. That's a pretty heavy task! We might elect a sample size of 200, again we have sacrificed the accuracy of our sample results, but we still can maintain the integrity of our random sampling technique with our population (remember, it is now a subset of the original population).

Using Charleston, South Carolina as an example, we can readily

obtain a satisfactory community sample through the use of the telephone directory white pages and our random number table from Appendix III. The 1977 edition of the telephone directory has listings for Charleston - North Charleston on pages 14-218. We have decided that we will be satisfied with a sample of 100 respondents. We further stipulate that we will reject any telephone listing which is not a personal residence. We further decide that since each page has four columns, we will use the random number table to randomly select a page. Then, randomly again using the random number table, select a listing from each of the four columns on that page. (Note: this is a slight compromise to our random selection process since this is similar to randomly selecting classes in a school.) A look at the columns showed a maximum number of possible entries to be 107. Most columns, however, contain less than 100 since many entries use more than one space. We, therefore, decided to use a two digit number to randomly select the column listings (again a slight compromise). A three digit number was required to randomly select the page. All of these decisions and rules must be written down, not only for the benefit of the persons assigned to do the actual selection but also for later reference to support the methods used in data collection.

Here's how our selection of over 100 community residents might go:

1. Drop finger blindly onto table -- beginning point = row 25,

column 16. The first 3 digit numbers traveling downward are:

237

694

571

121 ← first number within range of 14 - 218

Continuing to travel down the next four two-digit numbers are:

20, 86, 67, 47

These are the numbers we will use in selecting our sample from column 1, 2, 3, and 4. Turning to page 121 of the directory our four sample entries become:

Lewis, Harvey L.	4115 Olivia Dr.	552-2711
Liggitt, Richard K.	16½ Lamboll St.	722-3961
Limehouse LTd	8 Cumberland St.	577-9412
Lindsay, Robt B. F.	137 Hollywood Dr.	553-1125

Since Limehouse LTD appeared to be a commercial firm that we don't want, we decide at this time to use the next residential type listing in that column, Limehouse, Louis O. 404 Andrea Ct. 553-0498. We now have the first four of our random samples. We must also be sure to record at this time our new rule -- if a commercial entry is found, the next residential entry in that column will be used as a substitute.

Now back to the random number table and continue the selection process. We decided to draw 150 names and phone numbers in this

manner to insure that we would identify at least 100 participants. We used the first 100 people who answered our telephone questionnaire on the first or second calling attempt. Because of disconnected phones, no answers, and declining to participate, it took a total of 163 random selections to solicit 100 respondents. We had to continue beyond our original draw of 150.

It's apparent that simple random sampling can become complex and time consuming. But it is still the only legitimate way to select a sample. The only way to simplify the process is to go to a process that is less inclusive of the population. For example, a community interview schedule might be given to random shoppers at a major shopping mall on Friday night. Does this limit your sample? Yes, primarily because malls are frequented by people with access to automobiles for transportation, and young people tend to do more 'window shopping' than older people. However, given the limitations of your population subset, you can still implement a random sampling of that group. This type of 'street corner' survey has obvious limitations, but at the same time can provide effective public relations at the same time that it conveniently collects data.

Checkpoint 7: Do you have a sample of participants selected for each instrument to be administered? Did you sample from the total population? If so, did you apply a legitimate sampling technique allowing equal probability of selection to all members in the population? Did you follow the guidelines for minimum sample size? If you

sampled from a population subset, did you identify all the conditions and limitations pertaining to that subset?

Step Eight: Prepare and conduct data collection.

Thorough preparation of a data collection plan is essential to the successful implementation of the data collection activity. The evaluation coordinator and evaluation committee should view the development of the data collection plan as consisting of the following seven stages.

Stage 1. The first requirement is that a list of basic tasks necessary to conduct the evaluation be made. Anything that some one will have to do to carry out the data collection process is a task. Simple activities like the reproduction of materials, can cause major problems if not planned for. Record all essential tasks in sequential order so that none will be overlooked. Review to make sure you have not neglected any tasks.

Stage 2. Establish target starting and completion dates for each task. Table 4.2 can be used to record the starting dates and also completion dates. It is a good idea to allow some degree of flexibility in the schedule of events. Be sure to check your calendar when planning; you don't want to schedule a large data collection at the high school during spring break!

Stage 3. Identify the required skills for each task. For most tasks these will be apparent. This information can also be listed in table 4.2.

Table 4.2

Data Collection Planning Chart				
Task	Skill Required	Starting Date	Completion Date	Person Responsible

Stage 4. Who will carry out the data collection? The various personnel to be used need to be identified for each task. Making these plans at this time will allow maximum use of personnel by preventing overloading or underutilization of each member.

Stage 5. Do the personnel selected presently have the skills needed to perform the data collection? In many cases they will not have performed the required tasks before. You must identify their lack of skill and develop an appropriate training plan.

Stage 6. Providing the training to the data collection personnel will be the next task required prior to the actual data collection. A typical activity would be to provide instruction to high school students who had volunteered to administer a community interview schedule. An outline of such an instructional activity might be:

A. Distribute samples of the interview schedule.

B. Discuss the various aspects of the schedule and the manner in which students should administer it.

   a. introduce interviewee to C.E. program and value of community input.

   b. ask specific questions and leading questions.

   c. thank participant and offer brochure explaining district's activities.

C. Provide opportunity for students to administer interview schedule to each other. Also you might ask them

to practice their skills at home on relatives.

D. Explain how the data will be used in the evaluation process.

E. Present a system for the students to use to select interview participants (random selection procedure).

F. Clarify any questions students might have.

G. Distribute the schedule of data collection with team members and team leaders (school personnel) identified.

Stage 7. O.K., your data collection plans are complete. Did we forget anything? Oh yes, since we are talking about evaluation, you should take note of any problems or shortcomings encountered during the data collection process. These will be helpful later, for review of your procedure and may guide future planning efforts.

Checkpoint 8a: You should now have a complete data collection plan. Have all instruments been provided with appropriate data collection personnel? Have the personnel been properly trained and prepared for data collection? Have you considered time and timing requirements? Have you developed a list with all required data collection tasks accounted for and assigned to appropriate personnel? Did you evaluate activities for, and take advantage of, public relations benefits?

School Data Collection

Ready? It's time to put your plan into motion. Begin the data collection process. Follow your plan; remember the plan should be thought of as a guide only. Some flexibility is expected, make changes when necessary, but be sure to record the changes you make and any other variations for later reference.

Most LEA career education evaluations will consist of a once a year assessment. The best time of the year to do this is probably early spring. March or April usually are good times to collect data from in-school students. This might be termed the testing season since many nationally normed standardized examinations are given at this time. You will naturally want to coordinate your activities with any other testing programs. You don't want the students to become test weary, or have the teachers complain of an inability to teach because of continual testing. For schools using home rooms, this time could possibly be used if it is sufficiently long.

Community Data Collection

While students and teachers alike are familiar with in-school testing, neither group has had much experience at collecting data from the community. No serious problems should be encountered if a well developed data collection plan has been created and the data collection personnel, be they students or teachers, are properly trained for their job. As previously suggested, this data collection activity provides an excellent opportunity to present the career education program to the community at the same time that data is

being collected. The radio and television stations as well as local newspapers can be called upon for public service time to announce the activities. If interview schedules are administered at a shopping mall by students, a display booth can be errected depicting local career education activities. You might say that this positive publicity will bias the comments collected from citizens in favor of career education activities. While this may be true, our purposes would not consider this a handicap, but rather a benefit. Undesired bias can be partially controlled by careful structuring of the questions and if deemed necessary, elimination of the public relations effort.

"Bias be hanged! We need the P. R.!" you say? Good, now what to do about the data collection from business and industry? Hopefully your data collection plan called for face-to-face contact with the industry representative. Here again the dual purpose is data collection and public relations. This data collection will be the most time consuming and costly to collect, but will most probably be the most significant, since collectively this group has a great deal to do with community ideals, attitudes and activities. It is wise not only to find out what this collective group thinks of career education, but also to find out what they are willing to do to enhance the achievement of career education goals.

How long will your data collection activity take? You could have it operating continually year-around, but for practical reasons and to secure repeated cooperation in the future of the staff in-

volved, ten days to two weeks maximum is suggested for the actual data collection. This allows you to generate enthusiasm and complete the data collection before interest subsides.

Checkpoint 8b: Is the data collection progressing according to plan? Are you collecting and recording information about the data collection, changes in plans, variations, interruptions, external events, etc., which could affect your results? Is the data received in usable form, that is, have the subjects responded in proper fashion to the questionnaire or test? Did you begin immediately to review the data as it was returned?

Chapter 5

Putting the Data to Use

Step 9: Data Tabulation and Analysis

With the data collection activities completed, you should now have the answers to your original evaluation questions. The one difficulty being, 'What does the data say?' It is hard to obtain a clear understanding of the data collection results from the raw data. What does a pile of 150 parent questionnaires say about career education efforts? Do they accept career education concepts? Do they encourage increased career education activities? Are they supportive of these activities? Before reasonable answers to these questions can be given, those 150 parent questionnaires must be tabulated and analyzed.

The tabulation is step one; place the data in table form. This combines the information for all the raw data into a more readily understandable form. If electronic data processing is to be used, the data is coded and key punched on cards. Once key punched, the resulting deck of cards can be tabulated by using a card sorter or computer program. While the computer processing of data is convenient for large volumes of data, it is by no means a necessity for data tabulation or analysis. For small amounts of data, it is often actually easier to compute by hand.

While students, teachers, and parents will need to know individual test scores to answer questions about individual progress

and attainment, it is individual data taken collectively which will answer questions related to program success and process objectives. Because of this we are justified in combining individual scores to assess trends. The way this is typically done is to construct frequency tables. Figure 5.1 typifies the process of tabulation by hand using a worksheet. When the worksheet is completed, the frequencies are totaled and entered into a frequency table, figure 5.2. For added interpretation, the frequencies in each category may be converted to percentages. This aids comparison across groups, especially if the quantity of responses vary from item to item. In many cases, the data analysis ends here. Knowing that 79% of the parents polled definitely want their students exposed to a variety of occupations, answers the evaluation question. No further analysis is needed or desired.

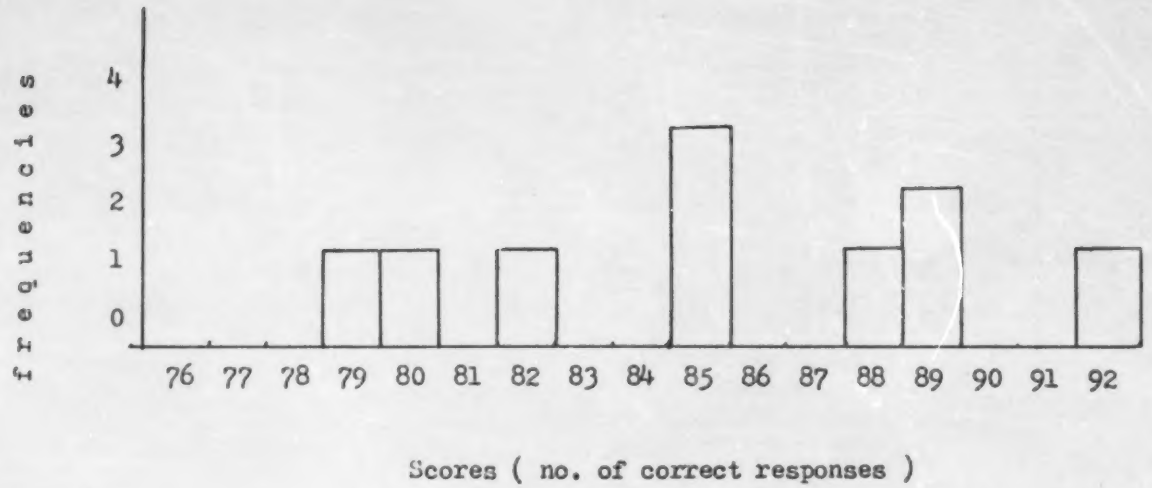
The frequency approach is useful for evaluation items that provide a small number of discreet responses, but what about a measure of vocational maturity where the scores could vary from 0 to 50 or 0 to 100? While a frequency distribution table would work, it would be cumbersome to present the final analysis in that form. Typically, frequency histograms or frequency polygons are used to display the information graphically in conjunction with some measure of central tendency and variability. Figure 5.3 and 5.4 illustrate a typical frequency histogram and frequency polygon with the mean ($\bar{X}$) and standard deviation, S.D., given.

Figure 5.1 Frequency tabulation sheet: Parent Support of Career Awareness Concepts

Strongly agree	𝍸 𝍸 𝍸 𝍸𝍸 III 𝍸 𝍸 𝍸 𝍸 𝍸
agree	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 I 𝍸 𝍸 𝍸 𝍸 𝍸
undecided	𝍸 𝍸 𝍸 III
disagree	𝍸 II
strongly disagree	III
no response	II

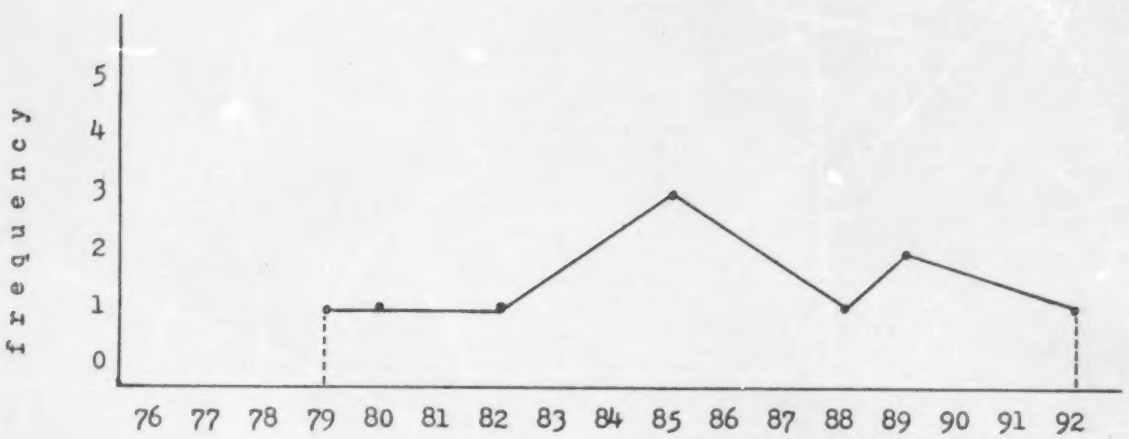
Figure 5.2 Frequency Table: Parent Support of Career Awareness Concepts

Response	frequency	%
Strongly agree	53	37
agree	61	42
undecided	18	13
disagree	7	5
strongly disagree	3	2
no response	2	1
Total	144	100



mean = 85.4 S.D. = 4

figure 5.3 Frequency histogram



Mean = 85.4 S.D. = 4

figure 5.4 Frequency polygon

While several measures of central tendency exist, the mean, or arithmetic mean, to be precise, is routinely used. This we know commonly as the 'average' score. Figure 5.5 shows ten scores for which the mean is 85.4. This number is arrived at by summing the individual scores and dividing the total by the number of scores.

Knowing the average score is extremely helpful in assessing how well the total group has done on the tested item, but we gain added knowledge if we can make some statements about the variability of the scores. Are they all very close to the mean? Or do they vary widely from high to low scores? For the ten scores in figure 5.5 we see that scores vary from 79 to 92, a range of 13 points. The range is defined as the highest value minus the lowest value, and gives us some indication of variability. It however, tells us nothing about what takes place between the highest and lowest score. A measure more suitably informative is known as the standard deviation (S.D.) This value is more complicated to calculate mathematically, but is more suited to comparing groups of scores. Figure 5.5 also shows the computation of the S.D. for the ten scores given in figure 5.5. The formula for figuring S.D. is

$$S.D. = \sqrt{\frac{\Sigma x^2}{N}}$$

where

S.D. is the standard deviation

Σx^2 is the sumation of the deviations from the mean squared

scores	deviation from the mean	deviations squared
79	-6	36
80	-5	25
82	-3	9
85	0	0
85	0	0
85	0	0
88	3	9
89	4	16
90	4	16
92	7	49
total=854		sum = 160

number of scores (n) = 10

$$\text{mean} = \frac{\text{sum of scores}}{\text{number of scores}}$$

$$\bar{x} = \frac{854}{10} = 85.4$$

$$\text{S.D.} = \sqrt{\frac{\text{sum of deviations}}{n}}$$

$$\text{S.D.} = \sqrt{\frac{160}{10}}$$

$$\text{S.D.} = \sqrt{16} = 4$$

figure 5.5 Computation of the mean and standard deviation

N is the total number of scores

$\sqrt{}$ is the symbol for square root

Are you still with us? If the preceding explanation of S.D. is not altogether clear, don't be concerned. You are not studying to be a statistician, so why not leave this type work to them! And if you don't have a statistics expert available, the use of the appropriate buttons on a modern calculator will magically produce the needed value.

Now that you have the magical value for S. D., what does it do for you? What does it mean? The S.D. when properly understood indicates the variability of scores in the distribution. The closer the scores cluster around the mean, the smaller the S.D.

The familiar bell-shaped curve, or normal distribution, figure 5.6, serves as the basis for interpreting the standard deviation. In this curve 68% of all scores lie between (+) and (-) one standard deviation from the mean; 95% of all scores lie between (+) and (-) two standard deviations from the mean, and 99+% lie between (+) and (-) three standard deviations from the mean. With this knowledge in the back of our minds we can interpret the following, mean = 85.4, S.D. = 4, to produce this interpretation. If the sample was from a normally distributed population, then the average score would be 85.4 and 68% of the scores would lie between 81.4 and 89.4 while 95% of the scores would lie between 77.4 and 93.4. If another group of students produced a mean of 85 and a S.D = 6, we would know that

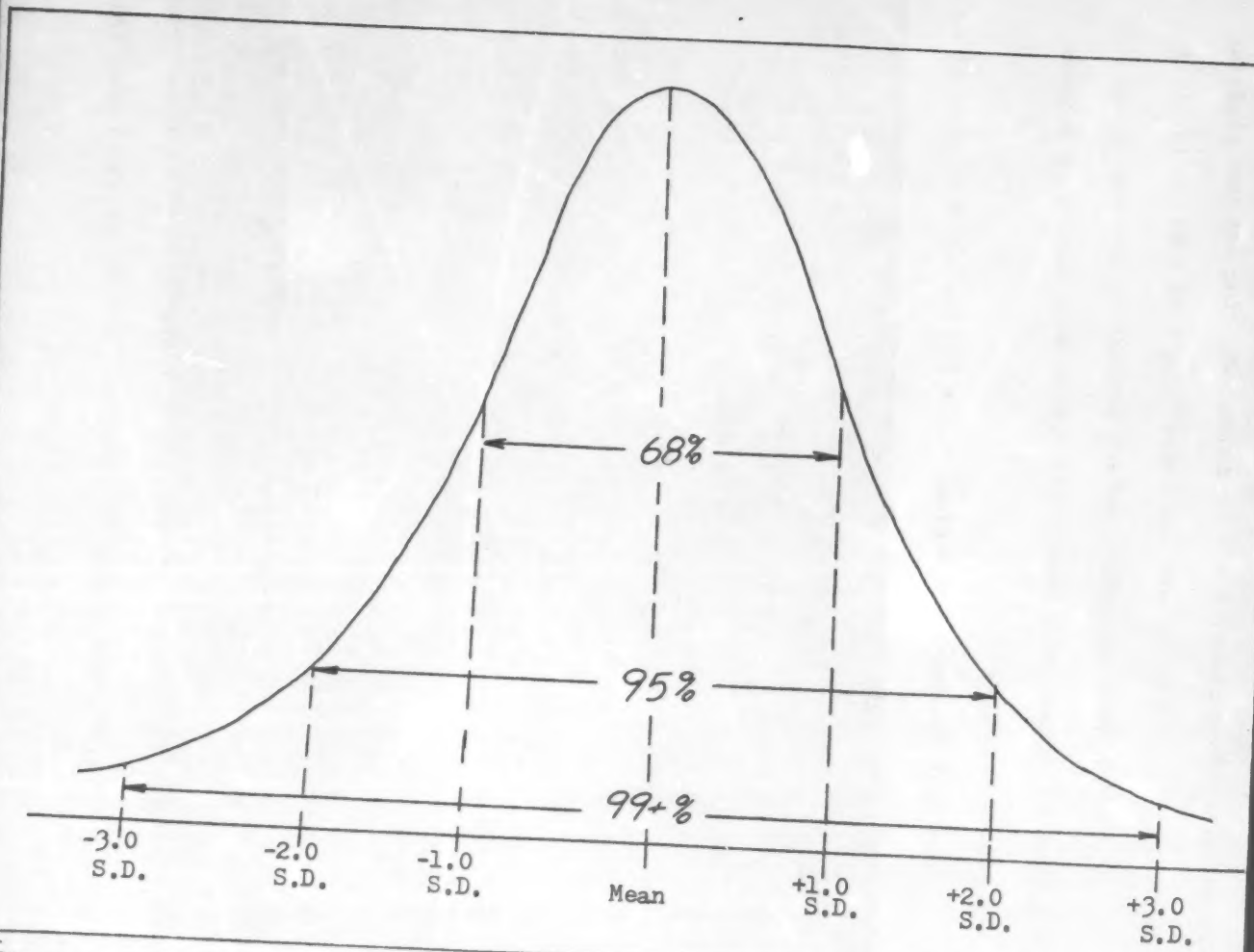


Figure 5.6 Normal Distribution

this group's scores varied considerably more. In this case 68% of the scores would be between 79 and 91, while 95% of the scores would be between 73 and 97, a much wider spread of scores.

As the example above illustrates, the value of knowing the standard deviation is that it gives us a better picture of the variability of scores. The standard deviation, mean, range, percentages, these all are referred to as descriptive statistics. They each provide us with information about the group of original scores. We use them because they consolidate and simplify the interpretation of information provided by the raw data.

While much of your first year career education data collection will be used to find the current status of affairs using descriptive statistics, in future evaluations you will want to make comparisons with previous year's results. At this point knowing the S.D. and mean allow you more easily to compare these groups. When we compare groups of data we are required to use inferential statistics. Inferential statistics allow us to compare two or more groups of data, and decide if the group scores differ significantly from each other.

To properly select and apply the correct inferential statistic for any given need requires a considerable familiarity with the subject. Since this handbook is not intended to teach statistics, and since we are assuming that not every readers' background will have prepared him or her to use these methods, we have two remaining, feasible choices, either solicit the aid of a statatician or don't

use these rather complicated methods. At this point in time it is suggested that the career education coordinator and evaluation committee develop their evaluation plans to preclude sophisticated design or statistical manipulation. While these methods can produce useful information, the potential for error is increased, and the range of people who can interpret and understand the results is sharply reduced. Since the majority of people who will make decisions based on the evaluation results are unsophisticated in statistical methodology, there is good reason to keep analysis simple. It is easy to depict results using bar charts and line graphs in conjunction with frequencies, averages, ranges, standard deviations, means, and percentages. These descriptive statistics will serve to interpret most any data collected for the assessment of career education.

With our directive to keep the analysis simple in terms of statistics, we can put our minds to the serious task of <u>data analysis</u>. So far we have discussed tabulation and analysis from a strictly mechanical point of view; manipulating numbers to simplify the data and highlight major facts. Of equal importance at this time is the tabulation of data according to several of the various variables. We may, for example, find that 86% of the adults sampled in the community favor the teaching of occupational training requirements in high school classes. Curiosity as to how this question is answered by high income versus low income adults, could be answered

by breaking the responses up into those groups, provided family income information has also been collected. Or the same question might be looked at in terms of male responders VS female responders. Given the number of possible ways to look at a variable in terms of several other variables, the task of analysis could be continued almost indefinitely. It is not suggested that every variable be analyzed in terms of all other variables. This would be a tremendous waste of time and energy. However, some hunches and questions should be followed. Sufficient time should be allowed for this type of investigation. Sometimes a restructuring of the data can put new light on an issue and produce meaningful information which might otherwise have been overlooked.

Checkpoint 9: Is the data collected usable? Begin your data tabulation and analysis as soon as the first batch of data comes in. It is essential to allow for early correction of any data collection errors. Are your data analyses limited to simple descriptive statistics? More complicated techniques are rarely necessary for a program status report. Have you looked at the data from several points of view? Compartmentalized thinking can preclude the identification of important trends if you do not open your eyes to their possibilities. Have you, or your evaluation committee, subjected the data to several different configurations? Analyzing data from a different perspective can sometimes offer new and useful information.

Step 10: Review Findings and Make Recommendations.

It's now time for the evaluation committee to look at the information and interpret its significance. In all likelihood, the information and recommendations will be made in the form of a written report.

It is important to keep the final report as brief and clear as possible. The findings can generally be listed in written form or depicted as graphs or tables directly following the statement of the question being researched. The recommendations based upon this information should, for clarity, be placed directly following the statement of findings. It will be useful for many people who deal with the evaluation report to have this information condensed into a summary of finding and a summary of recommendations. In fact, many of the people who need to receive the results may never need to see the complete report, but instead use only these summaries.

For those however, who use the total report, they should receive not only the findings and recommendations, but also a brief overview of the LEA's current career education activities, (remember Chapter three?), and a brief description of the instruments and data collection activity. Thus the completed report would have four distinct sections or chapters. If each section averaged 4 to 5 pages, a 16 to 20 page report would be the result. While it is not required, holding the report to this size, or less, will greatly improve the chances that it will be read and dealt with by those decision makers and interested persons who will receive it. Again, many persons

such as the classroom teachers and counselors will need to receive only the summaries of the findings and recommendations.

OK, you now know the format that your final report will take, but what will it say? What will be the recommendations included? Remember in the previous step, it was suggested that ample time be allowed to analyze the data, viewing it from different angles and viewpoints? This analysis provided the basic answers to the original evaluation questions. What your committee now must consider is the question, "what does it mean?" What can you do with strong community interest in career education? A low interest in career education?, or a misunderstanding of the goals of career education? You might recommend that those segments of the community supportive of career education be tapped for their contribution, either time, facilities, or other resources. You might recommend a strong community awareness campaign if you find the community unsupportive or misunderstanding of career education. In similar fashion every evaluation question must have its data reviewed and recommendations made. For each of the evaluation findings the questions must be asked, what does this data mean? How can or should we make changes to improve our programs?

A good way to uncover most of the important recommendations is to have each committee member suggest their individual recommendations. Once compiled, these can be reviewed by the total committee for consensus on whether or not to include each proposed recommendation in the final report. It is, unfortunately, the case, that the

evaluation coordinator and the evaluation committee can develop tunnel vision from dealing with the evaluation data over a long period of time. To compensate for this limitation, it is wise to provide the data summaries, data tables and charts, and statement of findings to a few persons outside the immediate context of the evaluation. This might be a school administrator, guidance counselor, teacher, or community college, or college educator familiar with general research skills.

This last recommendation is important for two reasons. First, the outside parties will (or should be) unbiased; they are less likely to be worried about who the recommendations effect. Secondly, it is impossible for this manual to offer any significant aid in making sound recommendations for action. While the manual has offered a system to collect and analyze data, the process of making suitable recommendations is developed with experience, over time. As the LEA develops experience in research activities of this nature it will be less important for you to solicit outside aid for this reason. However, the first reason, tunnel vision, will always be a factor to consider.

Checkpoint 10: Have you considered the many different recommendations possible from the findings of your evaluation? Did you utilize the input of all the evaluation committee members? Did you solicit recommendations from individuals outside the committee whom you asked to review the evaluation findings? Did the evaluation committee re-

view all the proposed recommendations and develop a final listing of recommendations to be included in the final report?

Step Eleven: Disseminate report and implement recommendations.

After reading through this guide, the career education coordinator may sigh, "the final report, finished! My job is over!" But is the job of the coordinator and evaluation committee really over? No one knows better than you and your committee the expenditure of time, money, and energy that went into the assessment process which culminated in the final report. Are you willing to let school decision-makers, administrators, faculty, and staff ignore or pay little attention to your efforts and results?

At this stage of the career education evaluation process the role of the coordinator changes from a researcher to a promoter. Like an advertisement agency, your job is now that of selling and promoting your product. What is the product you must sell? In a direct sense, it is the final report. You want it read and understood by those who must make decisions regarding the implementation of the report recommendations. In a broader sense, you and the evaluation committee want to promote career education understanding and implementation in your community. What you need to do now is plan a promotion campaign. Let's look at some of the most useful methods of spreading your information throughout the community.

Personal Contacts. Use yourself and members of the evaluation committee as personal envoys to disseminate information. Person-

to-person contacts are one of the most effective methods of disseminating information. The language of communication is more likely to be straightforward when people talk to each other, the concepts presented are more easily understood. The message may also carry more weight because it comes by word of mouth, either because some knowledgeable person has taken the trouble to talk to us, or because someone who has no personal profit motive, perhaps our neighbor, is telling us about it.

Newsletters, Brochures, and Other Printed Matter. Printed materials can be a valuable asset to the promotion of awareness, understanding, and receptivity of career education provided that they are readable and applicable to the purpose. Attractive, well-written flyers, brochures and newsletters can be effective instruments in the public relations efforts necessary to achieve widespread understanding and support for implementation of the evaluation report recommendations. In addition to producing special pamphlets for local use, you will want to make good use of existing printed media such as school and community newsletters. Articles about career education activities and proposed activities in the district will be read by many people who regularly receive the newsletter. Newsletters of various kinds can be found throughout the community. If news releases are written to fit the special interests of the publications then business and industry newsletters can become valuable additional dissemination sources.

News Media. Most local education agencies have someone responsible for clearing all news releases to the community. Many times this person is aware of who the releases are sent to, when they must be received, the format necessary, and other pertinent information. If this position exists in your LEA this person can be of assistance in preparing your public relations campaign. If there is no person in this capacity you will need to prepare your campaign yourself, however, it is still essential to 'clear' your activities with the appropriate administrator. This will normally be the school superintendent or someone on his administrative staff.

Essential ingredients of a good public relations program are fairness, honesty, perserverance and timing. Fairness will dictate that all local news media are given an equal opportunity to cover career education news. Honesty will help secure the trust and good will of media representatives. Timing will assure that news is released in a manner so that all news media can use it at the same time. Perserverance means that you will continue to send news releases to all media, no matter how infrequent they may be used. There is no way to predict when your information will be accepted for use, or when a request for an interview or feature may be forthcoming.

APPENDIX I

In this appendix you will find several instuments made available for use in conducting a career education evaluation. An extensive search for relevant career education instruments resulted in the selection of several instruments and test items which were reviewed, screened for inappropriate items, occasionally modified and ultimately adapted for use by South Carolina school systems. The instruments in this appendix are the end result of that process.

While the resulting compilation of material is considered extremely valuable to the local education agency, care should be exercised in their application. Individual community conditions might require further deletions, modifications, or additions. In all cases, these instruments should only be selected for use <u>if</u> they will provide answers to the evaluation questions posed by the career education evaluation committee.

Elementary Awareness and Knowledge - form 23

Background

Elementary Awareness and Knowledge is a composite test designed to assess second and third grade students' self-awareness and career knowledge. The test is non-verbal. The teacher reads the directions and test items aloud while the students respond with simple markings on their test booklets.

Part I is a series of awareness statements and accompanying sketches to which students are asked to respond. These fifteen items have been selected as the most functional from a longer form developed by Holfin, Gessner, and Nelson; Career Education Needs Assessment, University of Wisconsin, Menomonie, Wisconsin.

Part II is a series of ten items which require students to recognize occupational differences. These items comprise one section of the Career Knowledge Test developed by Barbara Fulton and published by Evaluative Research Associates, Inc.; St. Louis, Missouri. They have been reproduced with the permission of the author.

Instructions for Administering Section I

Read the following to your students:

"This test has a number of pictures of activities you can do. We would like to find out your feelings about the activities. There are no right or wrong answers. These questions will be read to you. Please look at each picture. Then color in one of the boxes to the

right of the picture. You may not do all of these activities. However, we want to know how you feel about them if you could do them. Remember there are no right or wrong answers. What you choose is right for you. It doesn't matter what the person sitting next to you chooses."

"Now put your name, your school (give name to them), and whether you are a girl or boy at the top of the page. (Pause while your students complete this.)"

"There are two sample questions. The first one shows a picture of a child watching a squirrel. The question is 'Do you like to play with another person most of the time?' Please select 'yes' if you like to play with another person. Mark 'no' if you do not like to play with others. The second sample shows two children playing basketball. The question is 'Do you like to play games?' Mark your answer."

"Do you have any questions?" (Answer the questions and be sure that they know how to answer.)

"Now we are ready for the first question."

"1. Are you good at helping a friend?"

"2. In working and playing, are you good at cooperating with others?"

"3. Are you good at stopping a fight or argument and helping the people make-up?"

"4. Do you like to teach others how to play a game?"

"5. Do you like to talk on the phone?"

"6. Do you feel good when you help with the shopping?"

"7. Can you write good letters or notes to your friends?"

"8. Are you good at deciding things for yourself?"

"9. Can you measure things well?"

"10. Do you like to ride by yourself?"

"11. Can you draw well?"

"12. Do you like to read books?"

"13. Are you good at hammering nails into boards?"

"14. Can you fix things that are broken?"

"15. Do you like to put things together?"

"You have now finished this task. Wait until I give you instructions for the next section."

Instructions for Administering Section II

When all the students have completed section one read the following:

"Turn to the next page in your answer booklet and follow the directions as I read them to you. Do not make any marks on your booklet yet."

"This part of the test is about several jobs available in your community. You will be asked to tell differences between jobs. You will be given a word followed by three pictures. You are to pick

out the picture that is most different from the word given."

Look at the first three pictures. The word is CHEF. Which picture is of a job that is the most different from that of a CHEF? Is it the baker, waitress, or sales clerk? The chef, baker, and waitress all work with food. The sales clerk does not. Therefore, the sales clerk is most different from the baker. Now, put a large "X" through the picture of the sales clerk on your paper."

Check to see that each student has correctly placed a large "X" through the proper picture. When everyone is ready read each key word to the class.

1. "Doctor," which picture is of a job that is the most different from that of a doctor?"
2. "Plumber," which picture is of a job that is the most different from that of a plumber?"
3. "Fireman," which picture is of a job that is the most different from that of a fireman?"
4. "Judge," which picture is of a job that is the most different from that of a judge?"
5. "Brick layer," which picture is of a job that is the most different from that of a brick layer?"
6. "Salesman," which picture is of a job that is the most different from that of a salesman?"
7. "Trashman," which picture is of a job that is the most different from that of a trashman?"

8. "Artist," which picture is of a job that is the most different from that of an artist?"
9. "Truck driver," which picture is of a job that is the most different from that of a truck driver?"
10. "Farmer," which picture is of a job that is the most different from that of a farmer?"

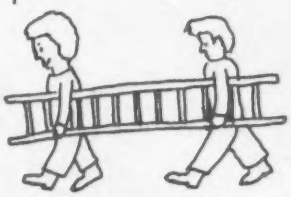
name _____
school _____
boy ___ girl ___

ELEMENTARY AWARENESS AND KNOWLEDGE

sample 1 yes ☐ no ☐

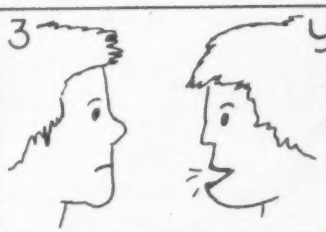
sample 2 yes ☐ no ☐

1 yes ☐ no ☐

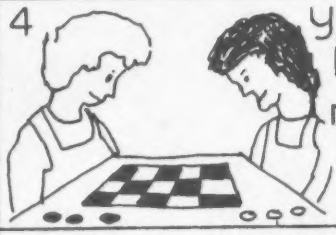


2 yes ☐ no ☐

3 yes ☐ no ☐



4 yes ☐ no ☐



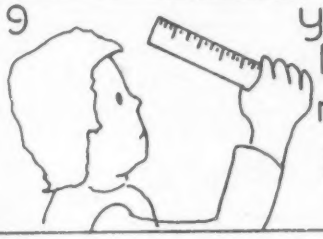
5 yes ☐ no ☐

6 yes ☐ no ☐

7 yes ☐ no ☐

8 yes ☐ no ☐

9 yes ☐ no ☐



10 yes ☐ no ☐

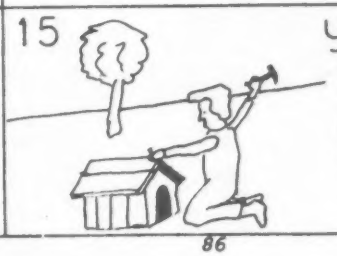
11 yes ☐ no ☐

12 yes ☐ no ☐

13 yes ☐ no ☐

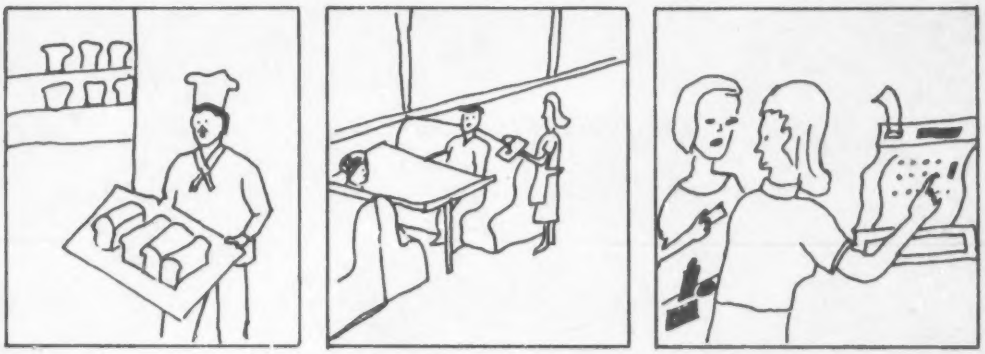
14 yes ☐ no ☐

15 yes ☐ no ☐



STOP!

Chef

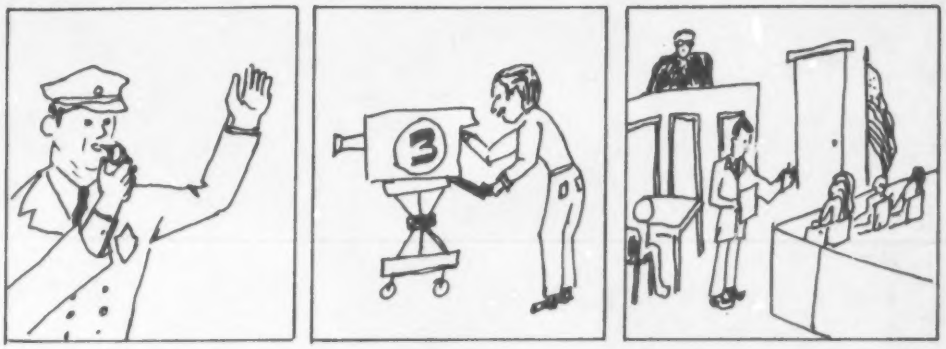


Doctor

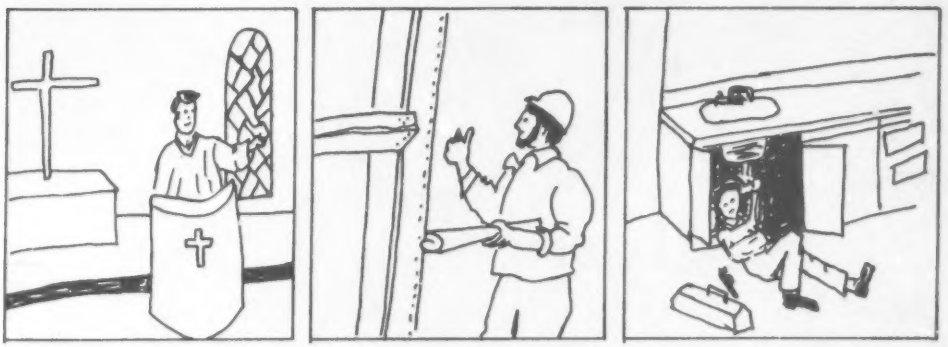
Fiumber

Fireman

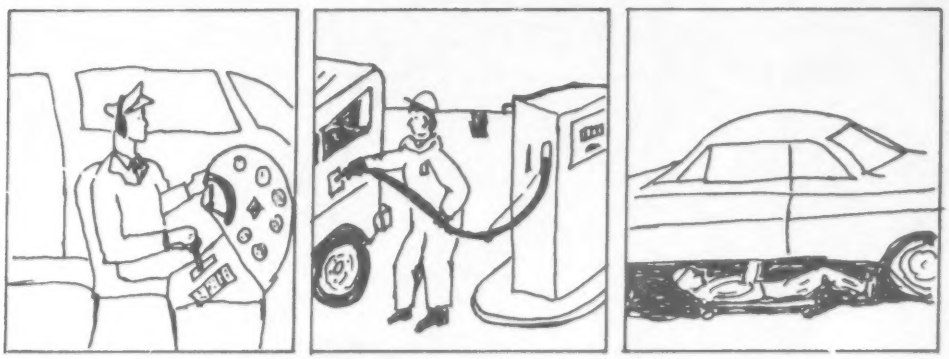
Judge



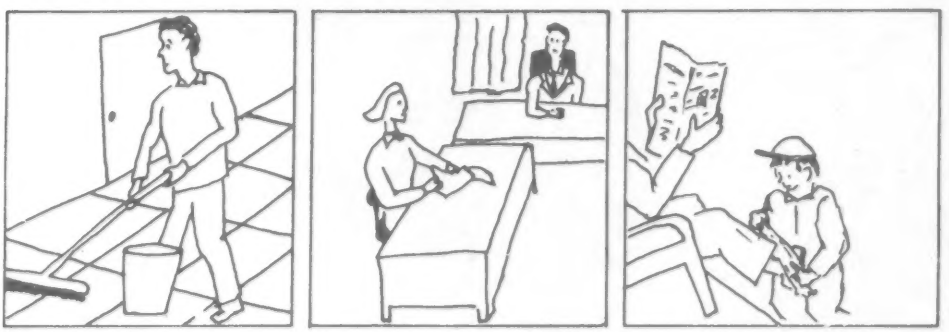
Bricklayer



Salesman



Trashman



Artist

Truck driver

Farmer

Name:_____ School:_____

Grade(Circle one): 6 7 8 9 Sex: M F

Career Education Survey - Form 789

The purpose of this test is to determine how much students your age know about various careers. The test measures how well prepared students are to choose occupations. And it also tests students ability to perform skills needed in many jobs

Directions
Please answer each item by circling the symbol which best answers the question. If you don't know the answer, mark the "I don't know" symbol.

1. Which one of the following jobs requires heavy lifting, crawling and bending?

   Automobile repairman

   ◯ Salesman

   ◯ Barber

   ◯ Railroad engineer

   ◯ I don't know

2. Which person below spends the most time sitting on the job?

   ◯ Furniture maker

   ◯ Salesman

   ◯ Forest ranger

   ◯ Secretary

   ◯ I don't know

3. Which person below spends the most time working with numbers?

- ◯ Accountant
- ◯ Electrician
- ◯ Architect
- ◯ Salesman
- ◯ I don't know

4. Which person below spends the most time working with machines?

- ◯ X-ray technician
- ◯ Computer programmer
- ◯ Receptionist
- ◯ Beauty Operator
- ◯ I don't know

5. Which one of the following jobs usually requires the longest period of training?

- ◯ Manicurist
- ◯ Plumber
- ◯ Assembly line worker
- ◯ Truck driver
- ◯ I don't know

6. Which one of the following jobs usually requires the longest period of training?

- ◯ Lawyer
- ◯ Computer Operator
- ◯ Electronic technician
- ◯ Insurance salesman
- ◯ I don't know

7. Which one of the following jobs usually requires the longest period of training?

- ◯ Supermarket checker
- ◯ Civil Engineer
- ◯ Surveyor
- ◯ Air conditioning mechanic
- ◯ I don't know

8. Which person usually earns the most money?

- ◯ Elementary school teacher
- ◯ Postal clerk
- ◯ Nurse
- ◯ Chemist
- ◯ I don't know

9. Which person usually earns the most money?

- ◯ Secretary
- ◯ Telephone Operator
- ◯ Nurses' aide
- ◯ Store clerk
- ◯ I don't know

Which of the following places have you visited?

10. Have you ever visited a dairy?

- ◯ Yes
- ◯ No
- ◯ I don't know

11. Have you ever visited a newspaper plant?

- ◯ Yes
- ◯ No
- ◯ I don't know

12. Have you ever visited a museum?

- ◯ Yes
- ◯ No
- ◯ I don't know

13. Have you ever visited a zoo?

- ◯ Yes
- ◯ No
- ◯ I don't know

14. Have you ever visited a planetarium or observatory?

- ◯ Yes
- ◯ No
- ◯ I don't know

15. Have you ever visited a factory?

- ◯ Yes
- ◯ No
- ◯ I don't know

16. Have you ever visited a college?

- ◯ Yes
- ◯ No
- ◯ I don't know

17. Have you ever visited a library?

- ◯ Yes
- ◯ No
- ◯ I don't know

Which of the following things have you done by yourself without help?

18. Have you baby set without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

19. Have you baked a cake or pie without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

20. Have you built something out of wood without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

21. Have you cooked a complete meal for your family without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

22. Have you drawn a map without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

23. Have you invented a game without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

24. Have you made a toy without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

25. Have you painted some object (not a picture) without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

26. Have you ordered something from a catalogue without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

27. Have you used the card catalogue in a library without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

28. Have you written a report without help?

- ◯ Yes
- ◯ No
- ◯ I don't know

If you were a millionaire, would you enjoy the following things?

29. Would you enjoy building houses and gardens if you were a millionaire?

- ◯ Yes
- ◯ No
- ◯ I don't know

30. Would you enjoy giving to charity if you were a millionaire?

- ◯ Yes
- ◯ No
- ◯ I don't know

31. Mr. Smith has a job. All day long he runs a machine that punches holes in leather belts. He does the same thing every day.

A. Do you think it is possible that Mr. Smith likes his job?

- ◯ Yes
- ◯ No
- ◯ I don't know

B. Give a reason for your answer.

32. A factory manager has just called a meeting of his foremen to decide whether they can make and deliver 200 inflatable boats of a new type within two weeks.

Which one of the following subjects would be <u>least</u> worthwhile to discuss at the meeting?

○ Whether the factory had enough material on hand for 200 boats.

○ What should be printed on the boxes the boats are shipped in.

○ The kind of material to be used.

○ Whether overtime will be required to meet the two week deadline.

○ I don't know

33. Which one of the fractions below is <u>larger</u> than .75?

○ 9/12

○ 7/8

○ 6/17

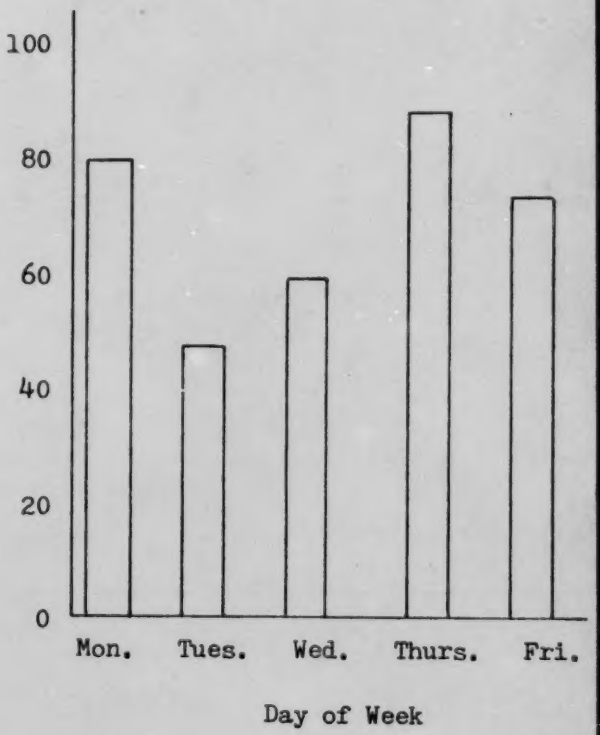
○ 17/25

○ I don't know

34. Look at the bar graph:

It shows the number of trees planted along a highway in a week.

The graph shows that 80 trees were planted on Monday and 50 trees were planted on Tuesday.



A. How many trees were planted on Wednesday?

ANSWER _____

B. How many trees were planted on Thursday?

ANSWER _____

C. How many trees were planted on Friday?

ANSWER _____

35. Look at the layout of an office and shop area:

A. How many feet long is the office at Side X?

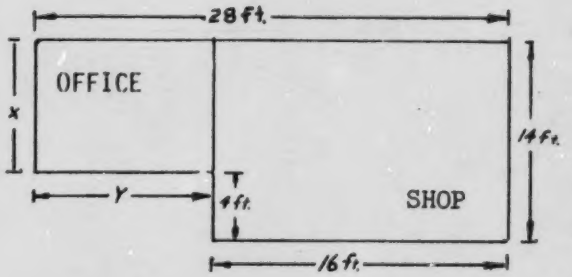
ANSWER _____

B. How many feet long is the office at Side Y?

ANSWER _____

C. How many square feet of floor space are there in the office?

ANSWER _____



Make the correct conversions for the following measures.

36. 30 inches = _____ feet

37. 2 feet = _____ inches

38. 45 seconds = _____ minutes

39. 1 minute = _____ seconds

40. 16 ounces = _____ pounds

41. $1\frac{1}{2}$ pounds = _____ ounces

42. Look at the table. According to the table, what size socks should you buy if you wear size 10 shoes?

- ○ 7
- ○ $7\frac{1}{2}$
- ○ 10
- ○ $10\frac{1}{2}$
- ○ 11
- ○ $11\frac{1}{2}$
- ○ I don't know

SIZE TABLE FOR SOCKS			
Shoe Size	Sock Size	Shoe Size	Sock Size
6-$6\frac{1}{2}$	$9\frac{1}{2}$	9-$9\frac{1}{2}$	11
7-$7\frac{1}{2}$	10	10-$10\frac{1}{2}$	$11\frac{1}{2}$
8-$8\frac{1}{2}$	$10\frac{1}{2}$	11-$11\frac{1}{2}$	12

43. Suppose you purchased $200.00 worth of merchandise from a store on an installment plan. You are to make 24 monthly payments of $11.35 each. How much money in finance charges will you have paid at the end of two years?

ANSWER _____

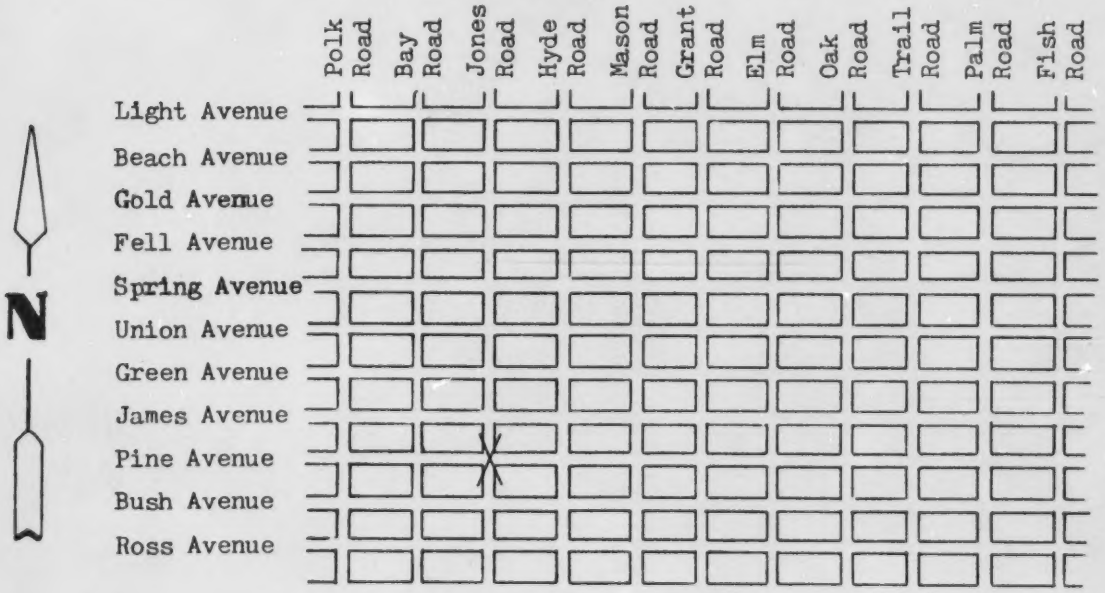
44. At the bottom of this page is a map of streets in a city. The compass tells you which direction is north. Pretend that you are at the corner of Pine Avenue and Jones Road (where the black X is). Draw a path on the map by following these directions:

Go four streets north on Jones Road.

Now go five streets east on Spring Avenue.

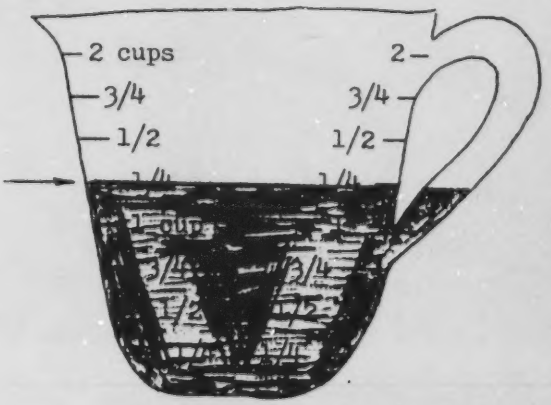
Now go three streets south on Oak Road.

Place an X at the corner of the two streets where you are now.



45. Pretend that your name is Dale Roberts and you live at 1545 Lake Street in Narka, Kansas. The zip code for Narka, Kansas is 66960. You have written a letter to John Way. He lives at 345 Moose Street, Nome, Alaska. The zip code for Nome Alaska is 99762. Address the envelope below. Make sure you write down everything that should go on the envelope.

46. The measuring cup is filled with water to the line marked by the arrow. How much water is in the measuring cup?



- ◯ 1/4 cup
- ◯ 1 cup
- ◯ 1 1/4 cups
- ◯ 2 1/4 cups
- ◯ I don't know

Now you will be given a brief description of a job that some person does. Write down the name of the job that is described.

47. I measure flour, sugar and other ingredients to make bread, rolls and cookies. I put dough in the oven to bake. Name my job. _____

48. I set up and operate machine tools, fit and assemble parts to make or repair metal machines. I must know mechanics. Name my job. _____

49. I design buildings and organize services needed for their construction. I prepare sketches and models for my clients. Name my job. _____

50. I receive and pay money, keep records of bank transactions, verify amounts to be deposited, insure receipts, etc. Name my job. _____

51. Is there <u>one</u> subject you have taken in school that taught you something that might be useful for a job?

A. ◯ Yes (go to B)

◯ No (end the exercise)

◯ I don't know (end the exercise)

B. What subject was it? _____

c. For what job might this subject be useful?

_____

52. List ten different things that a person should think about in choosing a career.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

53. Now you will be asked to answer a series of questions about your future job plans. Careers such as home making or full-time community or religious work are considered jobs.

A. Have you ever thought about the kind of job you would like to have in the future?

◯ Yes (go to B)

◯ No (end of this question)

◯ I don't know (end of this question)

B. What jobs have you considered?

1. _____
2. _____
3. _____
4. _____
5. _____

C. Which one of these jobs are you most interested in doing?

_____

D. Name three things about this job that you would like,

1. _____

2. _____

3. _____

54. What work do you do to help out at home?

_____

_____

_____

_____

_____

55. Suppose a large airline has the following policy:

"All stewardesses must be unmarried women between the ages of 21 and 35."

How would you change the policy? Write your new policy below.

_____

_____

_____

_____

_____

_____

_____

56. A. Have you ever helped anyone with school work that he could not do by himself?

◯ Yes (go to B)

◯ No (end of question)

◯ I don't know (end of question)

B. What did you do to help that person with his school work?

_____

_____

_____

_____

_____

57. List five kinds of part-time work people your age do to earn money in or near your town.

1. _____

2. _____

3. _____

4. _____

5. _____

58. Give six reasons why some people who are willing to work find it hard to get a good job.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6. _____

_____

High School Career Education Assessment Instruments

Two instruments have been provided for use in assessing the career education awareness and knowledge of high school students.

The Career Education Inventory was developed by the Bureau of School Service and Research, University of Washington. This instrument has been revised slightly to meet the needs of South Carolina schools in form 912. The Washington State version is available at reproduction cost from:

Joan Seeberger, Research Associate
Bureau of School Service and Research
University of Washington
Seattle, Washington 98195

The Texas Career Education Survey Test was developed jointly by the Texas Education Agency, the Westinghouse Learning Corporation, and the Partners in Career Education Project. This high school level career education evaluation instrument is reproduced in unedited form. This instrument is a multiple choice test containing 45 items (52 responses) which can be administered during a normal class period of 50 minutes. The survey will diagnose general areas of strengths and weaknesses of student development in career education.

The Career Education Survey Test is a part of the Texas Career Education Measurement Series (CEMS). This evaluation system is presently the most highly developed and widely used non-commercial test battery for evaluating career education at the high school level.

The CEMS system is composed of the survey test, 16 different category tests, and 63 basic learner outcome tests. One example each, of the 16 category tests and the 63 basic learner outcome tests, is provided for review only, since they are designed to be used in conjunction with career education instruction. If you are interested in these instruments, further information may be obtained from the Career Education Coordinator, Office of Vocational Education, Department of Education, 906B Rutledge Building, Columbia, South Carolina.

CAREER EDUCATION INVENTORY - Form 912

The questions which follow are designed to assess your current knowledge of and attitudes toward career planning. All answers will be placed on the appropriate answer sheet. You are encouraged to respond to all questions and work as rapidly as you can. The inventory has been divided into several parts; please be careful to see that you use the proper section of the answer sheet for each of these subsections. Pay particular attention to the underlined words.

PART 1 -- AWARENESS OF THE WORLD OF WORK

(For each question, choose the <u>one</u> best answer and then circle the corresponding letter on the answer sheet.)

1. Which of the following is usually <u>not</u> considered a workable way of stimulating the economy?

   a. decreasing personal income tax
   b. increasing unemployment benefits
   c. increasing government spending
   d. increasing interest rates

2. Many experts feel there is a shortage of homes. Which of the following reasons is <u>most</u> likely preventing the building of those homes?

   a. shortage of trees for lumber
   b. high interest rates on home mortgages
   c. shortage of construction workers
   d. poor weather

3. Under current equal opportunity employment legislation, which of the following want ads would be illegal?

   a. WANTED - competent keypunch operator with at least two years' experience.
   b. WANTED - attractive bartender
   c. WANTED - young women for light office work
   d. WANTED - insurance salesperson with college degree

4. For which of the following jobs would prior union membership most likely be important in securing employment?

   a. receptionist
   b. real estate agent
   c. iron worker
   d. car salesperson

5. Which of the following developments has been <u>least</u> affected by the widespread use of the automobile?

   a. growth of the suburbs
   b. location of heavy industry
   c. advent of shopping centers
   d. public ownership of mass transit

6. Which of the following industries would be <u>least</u> affected by a rise in international oil prices?

   a. plastics
   b. hotel/motel industry
   c. fertilizer
   d. communications industry

7. Which type of occupation <u>least</u> lends itself to unionization?

   a. university professors
   b. lawyers
   c. postal workers
   d. construction workers

8. What industry is <u>most</u> likely to suffer from rapid inflation throughout the economy?

   a. construction industry
   b. tobacco industry
   c. oil industry
   d. auto repair industry

9. According to current legislation, which of the following questions can a job applicant be required to answer on a job application form?

   a. questions about marital status
   b. questions about religion
   c. questions about educational background
   d. questions about nationality

10. Which of the following would qualify legally for unemployment benefits?

   a. a student who quits work to go back to school
   b. a recent high school grad who can't find a job
   c. a person hospitalized for an injury on the job
   d. a person laid off after one year on the job

11. Which of the following jobs most often requires working shifts or hours other than 8 a.m. to 5 p.m?

    a. file clerk
    b. bookkeeper
    c. retail sales clerk
    d. auto mechanic

12. Which of the following offers the most job security?

    a. steel worker
    b. carpenter
    c. disc jockey
    d. postal clerk

13. Which of the following jobs rely primarily on "on-the-job" training as opposed to formal training?

    a. firefighter
    b. route delivery clerk
    c. air traffic controller
    d. police officer

14. Who is likely to spend the most time helping people with personal and family problems?

    a. banker
    b. member of the clergy
    c. teacher
    d. police officer

15. Who is likely to spend the least amount of time working in the outdoors?

    a. landscape gardener
    b. civil engineer
    c. FBI agent
    d. farmer

16. In which of the following jobs is the successful worker likely to have the best opportunities to earn a high income?

    a. real estate salesperson
    b. waitress
    c. barber
    d. grocery store manager

17. Which of the following workers is most likely to get cuts and bruises?

    a. veterinarian
    b. mechanic
    c. cashier
    d. printer

18. Don has been active in a scout troop throughout his high school years and enjoys helping younger boys with their scouting skills. He was also a member of the high school debate team and was president of his junior class in high school. His best grades were in the social studies area. He has had high grades in all his courses and plans to go on to college. Based on these facts alone, which of the following occupations would be best for him to consider?

    a. building contractor
    b. architect
    c. insurance salesperson
    d. personnel manager

19. Sue has worked summers as a helper on a surveying crew. While she has taken no shop classes in high school, she often enjoys building cabinets and tables in the shop at home. She won an award for one of her cabinets in the 4-H Fair. When she finishes high school, she hopes to get some immediate job experience prior to going on with her education. Based on these facts alone, which of the following jobs would <u>most</u> likely build on her own interests and abilities?

    a. food processor
    b. photographer
    c. drafting
    d. zoo keeper

20. Judy has worked for several years in a grocery store. She likes to set up displays in the store window but tends to become bored with the monotony of stocking shelves. She likes to take her turn at the checkout counter and seems to enjoy meeting the variety of people who come through the store. She is very good with words and plans to study English when she goes on to college. Based on these facts alone, which of the following would most likely be a rewarding career?

    a. interior decorator
    b. office manager
    c. insurance agent
    d. advertising manager

21. Under current equal opportunity employment legislation, which of the following want ads would be illegal?

    a. WANTED - elderly man to do minor maintenance and repair work
    b. WANTED - attractive singer for local club
    c. WANTED - accountant with at least three years experience and a college degree
    d. WANTED - auto mechanic with two years technical training

22. Which of the following offers the most job security?

a. plumber
b. mailman
c. truck driver
d. vocalist

PART II - ATTENTION TO CAREER PLANNING

How much thinking and planning have you done in the following areas? What kinds of plans do you have? For each question below, choose one of the following answers to show what you have done. On the answer sheet, circle the number corresponding to your selected response.

| No activity | Little activity | Some activity | A great deal of activity

How active have you been in thinking about, planning, and:

a b c d 1. Finding out about educational and occupational possibilities by going to the library, sending away for information, or talking to somebody who knows about the possibilities.

a b c d 2. Talking about career decisions with an adult who knows something about you.

a b c d 3. Taking high school courses which will help you decide what line of work to go into when you leave school or college.

a b c d 4. Taking high school courses which will help you in college, in job taining, or on the job.

a b c d 5. Taking part in school or out-of-school activities which will help you in college, in training, or on the job.

a b c d 6. Taking part in school or out-of-school activities (for example: Science Club, school newspaper, Sunday school teaching, volunteer nurses' aid), which will help you decide what kind of work to go into when you leave school.

a = No activity
b = Little activity
c = Some activity
d = A great deal of activity

a b c d 7. Getting a part-time or summer job which will help you decide what kind of work you might go into.

a b c d 8. Getting a part-time or summer job which will help you get the kind of job or training you want.

a b c d 9. Getting money for college or training.

a b c d 10. Dealing with things which might make it hard for you to get the kind of training or the kind of work you would like.

a b c d 11. Getting the kind of training, education, or experience which you will need to get into the kind of work you want.

a b c d 12. Getting a job once you've finished your education and training.

a b c d 13. Doing the things one needs to do to become a valued employee who doesn't have to be afraid of losing his job or being laid off when times are hard.

a b c d 14. Getting ahead (more money, promotions, etc.) in the kind of work you choose.

PART III - BELIEFS ABOUT CAREER AND LIFE DECISIONS

Following are sentences which might describe you or what you believe. Read each sentence and decide whether you think that the sentence is true or false. Circle T if you decide that the answer is true, and circle F if you decide that the answer is false. Be sure to respond to every sentence.

T F 1. If I decide to do something, I always get it done.

T F 2. Teachers usually have good advice for someone who has a problem.

T F 3. I believe in luck.

T F 4. People who get fired from jobs are the ones who deserve it the most.

T F 5. Other people usually decide what is best for me.

T F 6. Getting a traffic ticket is mostly a matter of bad luck.

T F 7. The only way to get good grades is to study hard.

T F 8. Other people are often getting me into trouble.

T F 9. There's no use in planning because plans are usually changed by unexpected events.

T F 10. If I play around too much in school, I will probably never get a good job.

T F 11. Success depends mostly on knowing the right people.

T F 12. Trouble often finds me without my doing anything.

T F 13. I am responsible for the things that happen to me.

T F 14. It is almost impossible to get ahead if you don't know the right people.

T F 15. What is going to happen in my future is pretty much already determined.

T F 16. If you lose a contest, it is because you did not try hard enough.

T F 17. I depend on the teacher to tell me when I am doing a good job.

T F 18. Getting in trouble once in awhile is something that just can't be helped.

T F 19. Students who win class elections are the ones who work hardest.

T F 20. Other people are the greatest cause of my problems.

T F 21. Finding an interesting job is mainly a matter of luck.

T F 22. I have been unable to buy things I wanted when I did not plan ahead and save for them.

T F 23. Pay raises are given to the workers that the boss likes the most.

T F 24. If I am late for dinner, it is usually not my fault.

T F 25. If I try hard, I can be anything I want to be.

T F 26. Low grades go to the students the teacher doesn't like.

T F 27. Many things happen to me that I don't know how to control.

T F 28. People who cannot find a good job simply have not tried hard enough to find one.

T F 29. Decisions by other people will determine my future.

T F 30. Students who fail tests are bad guessers.

T F 31. Being a hard worker is most important in getting ahead.

T F 32. If I don't understand something in class, it's usually because the teacher wasn't clear enough.

T F 33. On most jobs, it takes a lot of luck to get everything done on time.

T F 34. When I don't do well on a test, it is because I did not study hard enough.

T F 35. To get most job promotions, you need to know the right people.

T F 36. Most of the time I can't help doing the things that get me in trouble.

T F 37. If I really tried, I could become a class officer.

T F 38. Many teachers get angry at students for no good reason.

T F 39. Luck has been very important in my life.

T F 40. Teachers give low grades to those students who don't work hard enough.

T F 41. I don't have much control over what happens to me.

T F 42. Many people's problems are caused by bad luck.

T F 43. What you get out of school depends entirely upon what you put into it.

T F 44. I get blamed for lots of things that really aren't my fault.

T F 45. Successful people have simply had better luck than unsuccessful people.

T F 46. When I get into trouble, I know pretty well what it is that I did wrong.

T F 47. It is easy to get good grades if the teacher likes you.

T F 48. Bad luck explains a lot of my misfortunes.

T F 49. Most teachers really care about their students.

T F 50. Kids get into trouble at school because of other students.

PART IV - CAREER PLANNING PROCEDURES

For each question, choose the best answer for you and then circle the appropriate number on the answer sheet.

1. Which of the following is the <u>least</u> effective to begin career planning?

   a. look at what is available on the job market
   b. take tests to find out what you should do
   c. consider what it is you want out of a job
   d. read as many job descriptions as you can find

2. The Occupational Outlook Handbook gives information about all of the following, <u>except</u>:

   a. job entry requirements
   b. average salaries in occupational fields
   c. job openings in major cities
   d. descriptions of job duties

3. Which of the following should be <u>least</u> important in your overall career decisions?

   a. what the job market is like
   b. your skills and aptitudes
   c. beginning wage
   d. what you want out of life

4. Mike is interested in so many jobs he cannot make up his mind. Based on this information alone, he should:

   a. try out as many jobs as he can
   b. try one and if he likes it, stay with it
   c. talk with his friends or parents
   d. find out more about what each job is like

5. Cindy is interested in a legal career as a court reporter, but does not know much about what they do. Based on this data alone, what is the best step for her to take?

   a. look up the job description in a legal journal
   b. contact the legal aid society
   c. ask questions of a practicing court reporter
   d. get descriptions of the job from the school counselor

6. Which of the following is the best source of information about job duties and opportunities?

   a. Vocational Guidance Quarterly
   b. Occupational Index
   c. Classified Want Ads
   d. Occupational Outlook Handbook

7. Matt is very good with skilled handwork and there is no one in the class with more mechanical aptitude or more art ability. His best grades are in math but he likes all these things. Based on these facts alone, what should he attempt to do first?

   a. decide now on one of these activities because of the ability or interest and then look for an occupation which uses that kind of asset.
   b. put off deciding about the future and wait until interest in some of these activities declines.
   c. look for an occupation which uses as many of these interests and abilities as possible.
   d. look for an occupation which uses math, since there is a better future in that than in art or working with one's hands.

8. Bonita wants to be a real estate broker. But she doesn't know how to go about it. Based on this information alone, what should she do?

   a. get a college degree first, then worry about being a broker
   b. change to an occupation she knows about
   c. get a job in a real estate office and work her way up
   d. talk with some brokers about how they trained for their occupation

9. Paul is a very good student and athlete. He wants to play football in college and enter law school after he graduates from college. His high school counselor has recommended that he major in business while at college as this will be the best background for entering law school. However, the athletic scholarship he has been offered is to a college that does not offer a business major. Based on this information alone, which of the following should be his first course of action?

a. try for an academic scholarship to the college of his choice.
b. investigate to see if other majors might be an appropriate background for entering law school.
c. give up the scholarship and apply to a college that offers a business major.
d. decide to give up either football or his law school plans.

10. Chuck comes from a military family with six children. His parents assume he will enlist in the service as soon as he graduates from high school, but Chuck wants to go to college, even though he knows his family cannot give him any financial help. Based on this information alone, which of the following would be the <u>first</u> step for Chuck to take?

a. forget about his college plan and join the service.
b. investigate his chances of receiving some sort of financial aid from sources other than his parents.
c. look for a job which he thinks he will like but will not require a college education.
d. look for any kind of job and begin saving money for college.

PART V - CURRENT JOB INTERESTS

A. From the occupational group preference form (next page) select a first and second occupational choice which most closely meets your present interests and needs. For example, you might choose <u>Accountant</u> as your first choice, from the Business and Office group, and <u>Art Director</u> as your second choice, from the Fine Arts and Humanities group. Copy the occupational titles of your first and second choice onto the answer sheet.

B. Now, think about the occupation you listed as your <u>first choice</u>. Circle the symbol on your answer sheet which best describes how much you know about that occupation.

<u>I Know:</u>	Very little	A little	Some	A lot
1. what people really do in this occupation.	a	b	c	d
2. different places where people might work in this occupation.	a	b	c	d
3. the abilities and traits needed in this occupation.	a	b	c	d
4. what the physical working conditions are.	a	b	c	d
5. the education and training needed to obtain this job.	a	b	c	d

		Very little	A little	Some	A lot
6.	the courses offered in high school which best prepare a person for this occupation.	a	b	c	d
7.	what the need for people in this occupation is.	a	b	c	d
8.	the different ways to enter the occupation	a	b	c	d
9.	the starting pay in this occupation	a	b	c	d
10.	what the chances for advancement are in this occupation.	a	b	c	d

OCCUPATIONAL GROUP PREFERENCE FORM

AGRICULTURE
(Including Agribusiness)
__Dairy Farmer
__Farm Supervisor
__Fish & Game Warden
__Horticulturist
__Landscape Gardener

CONSTRUCTION
__Bulldozer Operator
__Civil Engineer
__Electrician
__Plumber
__Surveyer

HOME ECONOMICS
(Including Consumer & Homemaker Education)
__Consumer Advocate
__Dietician
__Dress Maker
__Interior Decorator
__Social Worker

MARKETING & DISTRIBUTION
__Account Executive
__Broker
__Buyer
__Hi-Fi Salesperson
__Life Ins. Salesperson
__Market Research Analyst
__Office Machine Sales
__Purchasing Agent
__Sales Clerk
__Sales Manager

PRODUCT SERVICES
(Mechanics, Repairers)
__Aircraft Mechanic
__Auto Mechanic
__Major Appliance Mech.
__Office Machine Mech.
__Refrigeration Mechanic

TRANSPORTATION
__Bus Driver
__Parking Lot Attendant
__Pilot
__Stevedore
__Transportation Supervisor

BUSINESS & OFFICE
__Accountant
__Bank Teller
__Business Manager
__Computer Programmer
__Credit Analyst
__Lawyer
__Personnel Manager
__Stenographer
__Systems Analyst
__Typist
__Secretary

FINE ARTS & HUMANITIES
__Actor or Actress
__Announcer
__Art Director
__Dancer
__Economist
__Librarian
__Musical Entertainer
__Musician
__Sociologist
__Stage Director

HOSPITALITY & RECREATION
__Athlete
__Chef
__Motel Manager
__Ticket Taker
__Waiter/Waitress

NATURAL RESOURCE & ENVIRONMENT
__Chemist
__Geologist
__Meteorologist
__Oceanographer
__Physicist
__Soil Scientist

PUBLIC SERVICE
__College Professor
__Guidance Counselor
__Police Officer
__School Teacher
__Social Psychologist

COMMUNICATION & MEDIA
__Air Traffic Controller
__Commercial Artist
__Editor
__Photoengraver
__TV Camera Operator

HEALTH
__Clinical Psychologist
__Dental Hygienist
__Dentist
__Hospital Attendant
__Medical Doctor
__Medical Technologist
__Nurse (Registered)
__Occupational Therapist
__Pharmacist
__Veterinarian

MANUFACTURING
__Cannery Worker
__Drill Press Operator
__Engineer; Technician
__Handbag Assembler
__Industrial Designer
__Industrial Engineer
__Machinist
__Sewing Machine Operator
__Sheet Metal Worker
__Tool & Die Maker

PERSONAL SERVICES
__Aid to the Blind
__Food & Beverage Analyst
__Hair Stylist
__Host/Hostess (Restaurant)
__Household Cook
__Steward/Stewardess

Answer Sheet

Career Education Inventory

Name_____ Date_____

Directions:
Circle the one answer which best answers each question

Grade: 9 10 11 12 Sex: M F

Part I: Awareness of the World of Work

1. a b c d
2. a b c d
3. a b c d
4. a b c d
5. a b c d
6. a b c d
7. a b c d
8. a b c d
9. a b c d
10. a b c d
11. a b c d
12. a b c d
13. a b c d
14. a b c d
15. a b c d
16. a b c d
17. a b c d
18. a b c d
19. a b c d
20. a b c d
21. a b c d
22. a b c d

Part II: Attention to Career Planning

1. a b c d
2. a b c d
3. a b c d
4. a b c d
5. a b c d
6. a b c d
7. a b c d
8. a b c d
9. a b c d
10. a b c d
11. a b c d
12. a b c d
13. a b c d
14. a b c d

Part III: Beliefs About Careers and Life Decisions

1. T F
2. T F
3. T F
4. T F
5. T F
6. T F
7. T F
8. T F
9. T F
10. T F
11. T F
12. T F
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21. T F
22. T F
23. T F
24. T F
25. T F
26. T F
27. T F
28. T F
29. T F
30. T F
31. T F
32. T F
33. T F
34. T F
35. T F
36. T F
37. T F
38. T F
39. T F
40. T F
41. T F
42. T F
43. T F
44. T F
45. T F
46. T F
47. T F
48. T F
49. T F
50. T F

Part IV: Career Planning Procedures

1. a b c d
2. a b c d
3. a b c d
4. a b c d
5. a b c d
6. a b c d
7. a b c d
8. a b c d
9. a b c d
10. a b c d

Part V: Current Job Interests

1st Occupational Choice

_____

2nd Occupational Choice

_____

1. a b c d
2. a b c d
3. a b c d
4. a b c d
5. a b c d
6. a b c d
7. a b c d
8. a b c d
9. a b c d
10. a b c d

SURVEY

Texas
Career Education Measurement Series

Survey Booklet

Texas Education Agency
Austin, Texas

DIRECTIONS FOR MARKING YOUR ANSWERS

GENERAL DIRECTIONS

- Use a pencil to mark your answer sheet. DO NOT use a ballpoint pen.
- If you change your answer, ERASE your first answer completely.
- Each of your marks on your answer sheet should be DARK and should COMPLETELY fill the space for marking.

KINDS OF QUESTIONS

I. Some of the questions in this booklet are followed by a set of answers from which you should choose only ONE answer. Read each of these questions carefully and choose the answer you think is MOST correct. ON YOUR ANSWER SHEET darken the letter that matches the answer you choose.

Read the sample questions below to see how the answers have been marked on your Answer Sheet:

SAMPLE W: In your Test Booklet one item would look like this:

1. Which city is the capital of the United States?

(A) New York City
(B) Philadelphia
(C) Washington, D.C.
(D) Arlington

(C) is the correct answer. On the Answer Sheet the (C) space is darkened. Notice that the mark is dark and completely fills the space.

SAMPLE X: In your Test Booklet one item would look like this:

2. Which of the following is the BEST reason for obeying traffic rules?

(A) You are told you must.
(B) Your friends obey the rules.
(C) You will be called a good citizen.
(D) Your own safety is important.

(D) is the correct answer. On the Answer Sheet the (D) space is darkened.

SAMPLE Y: In your Test Booklet one item would look like this:

3. *Susan wanted to be dressed just right for an important date. Of the following persons, who would be the LEAST likely to help Susan pick the right thing to wear?*

(A) A friend
(B) A stranger
(C) Her father
(D) Her boyfriend

(B) is the correct answer. On the Answer Sheet the (B) space is darkened.

II. Some of the questions in this booklet have several parts that require you to darken either an (A) or a (B). Read each of the items carefully and decide whether (A) or (B) is correct for each part. ON YOUR ANSWER SHEET darken either the (A) or (B), whichever you think is correct.

Read the sample question below to see how the answers have been marked on your Answer Sheet.

SAMPLE Z: In your Test Booklet the item would look like this:

1. *Darken (A) for those things which are flowers. Darken (B) for the others.*

(A)	*(B)*	*a. tulip*
(A)	*(B)*	*b. car*
(A)	*(B)*	*c. rose*

On the Answer Sheet the (A) spaces are darkened for parts "a" and "c." The (B) space is darkened for part "b."

1. Darken (A) for each of the following that WOULD make a job personally satisfying for most people. Darken (B) for each one that WOULD NOT.

(A) (B) a. The job matches the worker's interest.
(A) (B) b. The environment is comfortable and safe.

2. Darken (A) if the following action IS an IMPORTANT example of an interview skill. Darken (B) if the action IS NOT an IMPORTANT example of an interview skill.

(A) (B) speaking only when asked a question.

3. Which statement BEST describes how the need for workers in any particular job should affect a person's career choice?

(A) The need should not be considered because the supply of workers always adjusts to the need for them.
(B) The need should be considered, but should not completely rule out a career.
(C) A person should consider only the few career areas that will have new types of jobs in the future.
(D) A person should consider only the careers that his/her parents feel will have openings by the time he/she is ready to work.

4. Read the following examples and answer the question below.

a. During summer vacation, Pat took a job in one of the national parks. His duties were to conduct small groups of people on hikes around a lake, pointing out relationships among the plants and animals and their environment. Pat said that he felt he was doing something worthwhile in teaching people about their natural environment.

b. Ann loved to play her guitar. When she graduated from college, she tried out and was hired by a band. She said it was almost too good to be true, being paid for something she enjoyed doing anyway.

c. There were only two days left before the citywide stock car race. Hank was standing beside the Starfire II while the mechanics were running some final checks. "This is the best one we've built yet!" he said. "We're going to break the track record for sure with this beauty."

Which ONE of the following statements BEST summarizes the relationship between the three examples?

(A) Some jobs don't provide feelings of satisfaction.
(B) The level of job satisfaction is directly related to the amount of time spent on the job.
(C) People doing very different jobs can experience satisfaction.
(D) The finished product is the most important part of a job.

5. With new machines and computers changing routine jobs, some assembly line and office workers may be fearful of

(A) over production of goods.
(B) losing their jobs.
(C) an increase in the cost of goods.
(D) longer working hours.

6. Juan and his boss are walking to the front door of the building where they both work. His boss opens the door for Juan and motions for him to go into the building. What would be the BEST thing for Juan to do?

(A) say "No, thank you," and wait until his boss goes in.
(B) go in and apologize to his boss for not opening the door for him.
(C) go in and say, "Thank you."
(D) go in and say nothing but watch for a chance to open a door for his boss.

7. In which ONE of the following situations would the individual NOT need to make an adjustment?

(A) Jane's boss asks her to work overtime on a special project.
(B) Herman's boss is pleased with his work.
(C) Jose, who has been working with Charles, has been assigned to work with Janet.
(D) Fred's plant supervisor tells him that the plant will be shut down for two months.

8. Chuck and Ralph have been friends for several years. Ralph has just been promoted; he is now Chuck's supervisor.

Select from the list below the ONE MOST appropriate behavior for Chuck to display when working under the supervision of Ralph.

(A) stop being friends with Ralph outside the work situation
(B) do things the way he feels they should be done because he knows as much as Ralph
(C) follow Ralph's instructions on the job
(D) do things the way his co-workers are doing them

9. Mrs. Sweeney is interested in cooking. She takes the extra time to plan well-balanced meals. She buys fresh fruit and good quality meat. She uses new recipes and tries to make the food look good. Which ONE of the statements below describes an ADVANTAGE of Mrs. Sweeney's concern with quality?

(A) The family will probably be healthier.
(B) Mrs. Sweeney will spend a great deal of time at the supermarket.
(C) Most of the family budget will be spent for food.
(D) Mrs. Sweeney will not have much time for other household tasks.

10. A group of similar courses is sometimes called a program of study. Which ONE of the following programs would probably be MOST helpful if you wanted a career in construction?

(A) general sciences
(B) vocational office education
(C) industrial arts
(D) physical education

11. If heating oil became scarce in the United States, a variety of things would happen. Which ONE of the following results of this scarcity would be LEAST likely to occur?

(A) Some industries would switch from oil to coal for heating.
(B) The price of oil would go up, and the cost of heating homes would become more expensive.
(C) Many oil companies would explore in areas where they had not searched for oil.
(D) Most remaining oil would be taken off the market completely in order for oil companies to rebuild their reserves.

12. You have been working one week as a mechanic in a service station. A fellow worker tells you that he has been denied a raise even though his work has seemed satisfactory. He asks you if you will speak to the boss for him.

In this situation, your responsibility to your fellow employees means that you should

(A) talk to your boss and get the facts of the case.
(B) suggest to the worker that he file a discrimination complaint.
(C) recommend that the employee talk to the boss again if he is not sure of the reasons why he has not been given a raise.
(D) avoid the employee so that you do not become known as a troublemaker.

13. Listed below are some situations which you may encounter on the job. Which ONE of the following situations would MOST likely involve your making a compromise with someone else?

(A) You are asked to be the representative from your department on a committee to decide how job tasks will be given out to employees of all departments.
(B) You are told to read your work more carefully so that you can eliminate errors.
(C) You are asked to show a new employee the office routines and to introduce him/her to the other employees.
(D) You are given an assignment and are asked that it be finished by noon.

14. Darken (A) for each behavior described below that will increase his chances for success. Darken (B) for each one that will have little effect on his success.

(A) (B) a. He gets along well with other people.
(A) (B) b. He is dependable and enthusiastic about his job.

15. Kurt is a quiet, pleasant individual. He spends his time working and seldom takes any time to talk with other workers.

Which ONE of the following job characteristics would be the MOST important to Kurt in choosing a job?

(A) supervising others
(B) working with many co-workers
(C) working alone most of the time
(D) being closely supervised

16. Which ONE of the following describes the MOST useful information that you would gain from talking with qualified people in a career area of interest to you?

(A) You would learn which individuals will be competing for a job.
(B) You would find out if your counselor would approve of this area as your career choice.
(C) You would find out if you would succeed in a chosen career area.
(D) You would be better able to compare different types of jobs within the career area of interest to you.

17. Carol, who is a volunteer worker at General Hospital, is graduating from high school. She hopes to make nursing her career. The hospital has offered her a job as a nurse's aide. Carol is trying to decide whether to take the job or to enter her local community college to become a Licensed Vocational Nurse.

If Carol decides to go to the community college and becomes a Licensed Vocational Nurse, which ONE of the following is MOST likely to be a result of her decision?

(A) She can go anywhere she wants and receive higher wages than any other nurse.
(B) She will learn that there will be very little need for nurses in the future.
(C) She will decide not to get a job as a nurse even if she is licensed.
(D) She will get a better job and earn more money than she would have as a nurse's aide.

18. Paula Robinson and her family live on their farm. Like other families in their community, religion is very important to their lives. Women do not wear make-up; no one in the community smokes. Families in the community are very close and help each other.

Which ONE of the factors below MOST influences Paula's lifestyle or way of life?

(A) income
(B) culture
(C) formal education
(D) career

19. From the following list of job titles, select ONE which uses counseling skills.

(A) auto mechanic
(B) foreman
(C) navigator
(D) clergyman

20. Jane, a social worker, has completed a case which required a great deal of time and effort. Select the ONE statement which shows that Jane takes pride in her work.

(A) Jane told a fellow worker how good she felt about the job accomplished.
(B) Jane left work early because the task was completed.
(C) Jane decided to apply for a new job that would pay more money and would not demand so much time.
(D) Jane talked with Helen about a case on which she was working.

21. Darken (A) if the statement DESCRIBES a result of prejudice between different races or ethnic groups. Darken (B) if it DOES NOT.

(A) (B) a. Misconceptions and myths would be cleared up.
(A) (B) b. Riots and outbursts could result between groups.
(A) (B) c. Groups of people of different races or ethnic backgrounds could not work well together on the job.

22. The statement below describes how Elaine sometimes feels about herself. Darken (A) if the statement shows Elaine has a POSITIVE attitude toward herself. Darken (B) if the statement shows she has a NEGATIVE attitude toward herself.

(A) (B) Elaine sometimes feels angry at herself because she is not very athletic.

23. Darken (A) for each service which is provided by various levels of government in the United States and which is paid for by public tax money. Darken (B) for each service that IS NOT.

(A) (B) a. telephone
(A) (B) b. city street maintenance

24. The Reserve Chemical Company recently added a computer to its bookkeeping department in order to summarize sales and trends very rapidly.

Which ONE of the following statements BEST describes how this change would likely affect employees of Reserve Chemical?

(A) Extra bookkeepers would be hired.
(B) Some employees in the department would be retrained and some replaced by people with computer training.
(C) There would be more bookkeeping done by hand.
(D) Personnel in other departments would not be affected by the change in the bookkeeping department.

25. Which ONE of the following BEST defines wages?

(A) Wages are what a person is paid for his or her time and effort.
(B) Wages are what a property owner receives for the use of his/her property.
(C) Wages are the profits a person receives from owning shares of stock in a company.
(D) Wages are that part of a person's salary that is deducted for government taxes.

26. Claire works in a bank and brings home $320.00 per month. Her budget includes the following items:

rent	$120.00
food	40.00
gasoline	25.00
car payment	80.00
laundry and dry cleaning	10.00
utilities	20.00
clothing	10.00
entertainment	15.00
Total	$320.00

Claire is moving soon to a larger apartment. The rent is $140.00, but the utilities are included in the cost of the rent. What difference will this make in her monthly budget?

(A) She will have some extra money to spend.
(B) Because of the increased rent she will have less money to spend for entertainment.
(C) She will be able to omit the "utilities" item from her budget.
(D) She can omit the utilities item and have the extra money to spend on clothes.

27. Joan assisted the physics teacher in the school's electronics laboratory for two years during high school. Joan has obtained a degree in electrical engineering and now operates an experimental laboratory for a research company. Which statement BEST describes Joan's high school experiences?

(A) had no effect on her career choice
(B) gave her the opportunity to explore her interests in electronics
(C) encouraged her to change her career plans
(D) insured that she would follow a career in the field of physics

28. Eight big logging companies raised the price of raw lumber by a large amount. The housing industries believed they had no choice but to raise the price of the homes they offered for sale. What effect did the price change probably have on the demand for the houses?

(A) The demand was probably greater.
(B) The demand was probably less.
(C) The demand was probably the same.

29. Which statement is true about deciding on a career?

(A) A person who does well in school should only consider careers that require a college education.
(B) A person should decide alone what career to choose, and not seek advice from other people.
(C) A person should examine his/her abilities before deciding on a career.
(D) The money that can be earned in a career is the most important factor to consider.

30. A deadly gas was leaking from chemical tanks in an industrial section of town. Public health officials decided it was necessary to evacuate nearby residential areas because of the possible danger. Half of the officials drove through the neighborhoods with loudspeakers to inform the people of the evacuation. The other half went door-to-door. The neighborhoods where officials drove through with loudspeakers were evacuated twice as fast as the neighborhoods where officials went door-to-door.

Which ONE of the following BEST describes why using loudspeakers was more effective than going door-to-door?

(A) It was more exciting to use loudspeakers.
(B) Loudspeakers got the attention of more people faster than did officials who were walking around.
(C) It was more convenient for the officials to drive than to walk around.
(D) People more readily believed the officials using loudspeakers than those going door-to-door.

31. Suppose that you have been hired as a secretary. You enjoy your work and feel that you have had a successful experience so far. Your boss asks you to do the following things as part of your job. Darken (A) for those items which you feel are REASONABLE requests. Darken (B) for those items which you feel are UNREASONABLE requests.

(A) (B) a. You are asked to familiarize a new secretary with the general office routine.
(A) (B) b. You are asked to tell another secretary that he/she has been fired.

32. Joe wants to be his own boss and run his own business. If he can match his personal goals with his career choice, Joe is MOST likely to

(A) make more money.
(B) obtain more education.
(C) have greater job satisfaction.
(D) explore new career directions.

33. Darken (A) if this statement is a reason for conserving resources. Darken (B) if it IS NOT.

(A) (B) Resources are unlimited and available to everyone.

34. Joey is interested in the employment possibilities of a particular company in her town. What is the BEST source of information available for Joey to find out about a job with the company?

(A) state employment agency
(B) school counselor
(C) employment office of the company
(D) classified section of the local newspaper

35. Read the following descriptions of people of different races interacting in work situations. Which ONE do you think is the BEST example of RESPECTFUL behavior?

(A) Mike, a black, and Charles, an Anglo, work together on a government research project. When Mike and Charles disagree, Mike goes directly to the supervisor to complain.
(B) Mr. Green, an Anglo, and Mr. Swartz, a black, have worked next to each other on the same job for ten years. Mr. Green and Mr. Swartz have seldom talked to each other.
(C) Fred Bear has worked in a factory close to the Indian reservation for five years. He has been a faithful and hard working employee. Mr. Bear wants to take Thursday off from work to attend a tribal celebration. The boss has threatened to fire him if he takes that day off.
(D) Mei Lee lives and works in Chinatown. Sally Sands, a college student, has been hired as a summer employee at the plant where Mei Lee works. Mei Lee introduced Sally to other workers on the job.

36. George works for the Incredible Toy Company. The company gave him time off to get a complete physical examination at the company's expense.

Which ONE is the BEST reason for the company's actions?

(A) The company has an agreement with the doctor who gives the exams.
(B) The company is aware that healthy employees work better.
(C) Employees with good health are given extra vacation time.
(D) The company will decide whether employees are well enough to get a promotion.

37. In former times, individuals and families were able to provide for a large part of their needs by the work of their own hands. Today, people must depend on others to supply many of their needs, such as food, clothing, shelter and medicine.

Three of the following statements describe conditions resulting from dependence on others. Select ONE statement that DOES NOT.

(A) A person does not need to have as many different skills as before in order to live.
(B) Cooperation among people is more necessary than before.
(C) More people than ever before are completely independent.
(D) People have more opportunity than before to become very good at one skill.

38. Charles Morgan is a student teacher. Every day after his classes he and the teacher discuss his performance. Which of the following is the BEST reason for him to listen to the teacher's comments concerning his work?

(A) He could learn better ways of getting certain points across to the students.
(B) He needs to learn the students' names.
(C) The teacher will always want to point out his errors.
(D) The teacher doesn't have time to talk to him during the day.

39. One of our basic economic resources is the strength, skill and intelligence of our people. What is this basic resource called?

(A) technology
(B) capital
(C) labor
(D) raw material

40. Which ONE of the following is a reason why banks charge interest when they loan money?

(A) to discourage people from borrowing money
(B) to attract more bank customers
(C) to earn money for the bank
(D) to compete with loan companies

41. Listed below are ways a citizen of the United States might participate in the country's political system. Which ONE would reflect a positive attitude toward the country?

(A) emphasizing political views by threatening a government official in a public speech
(B) following all campaign rules while running as a candidate for mayor
(C) participating in a plan to take over a government building
(D) attempting to bribe a state representative in order to gain support for a cause

42. Which ONE of the following is a RIGHT that American citizens are granted by the Constitution?

(A) the right to own property
(B) the right to vote only if the citizen is a property owner
(C) the right to free use of government land
(D) the right to shoot someone who is trespassing

43. Which ONE of the following is an ADVANTAGE of being a leader?

(A) A leader is often highly respected.
(B) A leader often gets the chance to work more than eight hours a day.
(C) A leader is able to give up free time for a cause.
(D) A leader needs to listen to everyone's problems.

44. Greg Hernandez is interested in getting a part-time job after school. Darken (A) for each behavior listed below that will help Greg to get a job. Darken (B) if it will not.

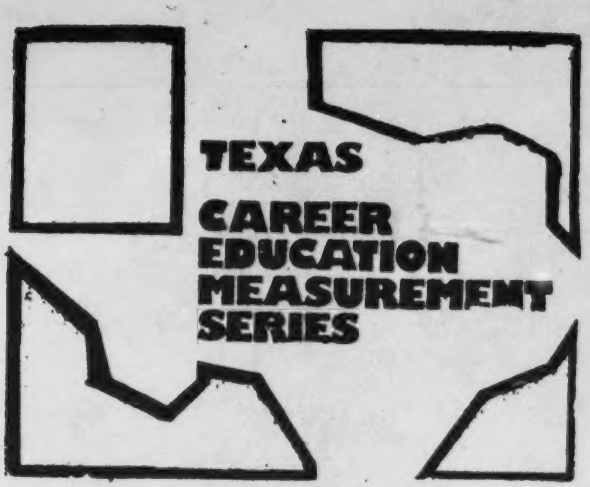
(A) (B) a. Greg continues interviewing for jobs, even when he gets discouraged.
(A) (B) b. Greg often criticizes himself and tells people that he is not very good at things.

45. Graduation is coming. You have no idea of what you want to do when you leave school. You are fearful about your future and trying to decide what to do.

Below are actions that you might take in an effort to solve your problem. Identify the action that is LEAST helpful by darkening the appropriate letter on your Answer Sheet.

(A) talk with the school counselor
(B) write to universities, community colleges and trade schools to learn about opportunities
(C) find out what your best friend is going to do
(D) get information and advice from the local state employment office

ALTERNATE DIRECTIONS FOR HANDSCORING THE SURVEY TEST*



THESE MATERIALS WILL BE USEFUL TO THE EDUCATOR WHO WISHES TO ADMINISTER AND HANDSCORE THE CAREER EDUCATION MEASUREMENT SERIES SURVEY TEST.

MATERIALS included in the package for the Survey Test: NOTE: The school should duplicate materials in this package as they are needed for administration. The originals should be returned to the regional education service center.

- Teacher answer key
- Student answer sheet - Survey Test
- Student summary sheet - Survey Test
- Example of scored student answer sheet and student summary sheet
- Class summary sheet
- Table for calculating percentages

HANDSCORING the test:

- Duplicate one copy of the student answer sheet and student summary sheet for each student taking the test.
- Instruct students to mark their answers to the test items in the blanks following the item numbers on the student answer sheets and to disregard the sub-category columns. These will be used by the teacher to score student responses.
- Use the teacher answer key to score each response. If a response is correct, circle the asterisk (*) under the appropriate sub-category to which the test item relates. Do not mark incorrect responses.

* These directions and materials are provided as an alternative to that given in the DIRECTIONS FOR HANDSCORING/CAREER EDUCATION MEASUREMENT SERIES, December 2, 1975.

SUMMARIZING the results:

- Locate the "summary" section on the last page of the student answer sheet.
- Count the number of items that the student answered correctly for each sub-category. (This will be the number of asterisks (*) that are circled.)
- Record the number of correct responses for each sub-category in the boxes beside "total correct."
- Compare the number of correct responses with the "performance criteria" number suggested for each sub-category.
- If the number of correct responses for a sub-category is less than the performance criteria number, place a check mark in the "area of concern" box.

INTERPRETING the results:

- If there is a check mark in the box labeled "area of concern," there is evidence that the student has a probable weakness in that particular sub-category.
- To confirm the diagnosis, one or more of the Basic Learner Outcome tests which are identified under each area of concern, could be administered to the
- student. NOTE: Information about the Basic Learner Outcome Tests can be found in A User's Guide for the Basic Learner Outcome Tests.

PREPARING a class summary report:

- After all tests have been scored and individual learner needs identified, you may wish to make a summary of the entire class results to see if there are sub-categories in which the performance of the entire class is generally weak.
- Locate the class summary, go through each summary section for each student answer sheet, count the number of check marks in the "area of concern" box for each sub-category, and record that total in the box labeled "number of students not meeting the performance criteria" on the class summary sheet.
- After this process is completed for all sub-categories, record the total number students who took the test in the box labled "total number of students tested."
- Divide the number of students not meeting the performance criteria in each sub-category by the total number of students tested and record the result in the box labeled "areas of concern for the class." NOTE: For those not having access to a calculator, you may refer to Table I which has calculations for a class with up to thirty students.

Those areas which have the highest numerical values will be the areas to which group level instruction and/or diagnosis is most appropriate.

Division of Educational Assessment
Texas Education Agency
Austin, Texas
September, 1977

TEACHER ANSWER KEY

Survey Test

1a	A	23a	B
1b	A	23b	A
2	B	24	B
3	B	25	A
4	C	26	C
5	B	27	B
6	C	28	B
7	B	29	C
8	C	30	B
9	A	31a	A
10	C	31b	B
11	D	32	C
12	C	33	B
13	A	34	C
14a	A	35	D
14b	A	36	B
15	C	37	C
16	D	38	A
17	D	39	C
18	B	40	C
19	D	41	B
20	A	42	A
21a	B	43	A
21b	A	44a	A
21c	A	44b	B
22	B	45	C

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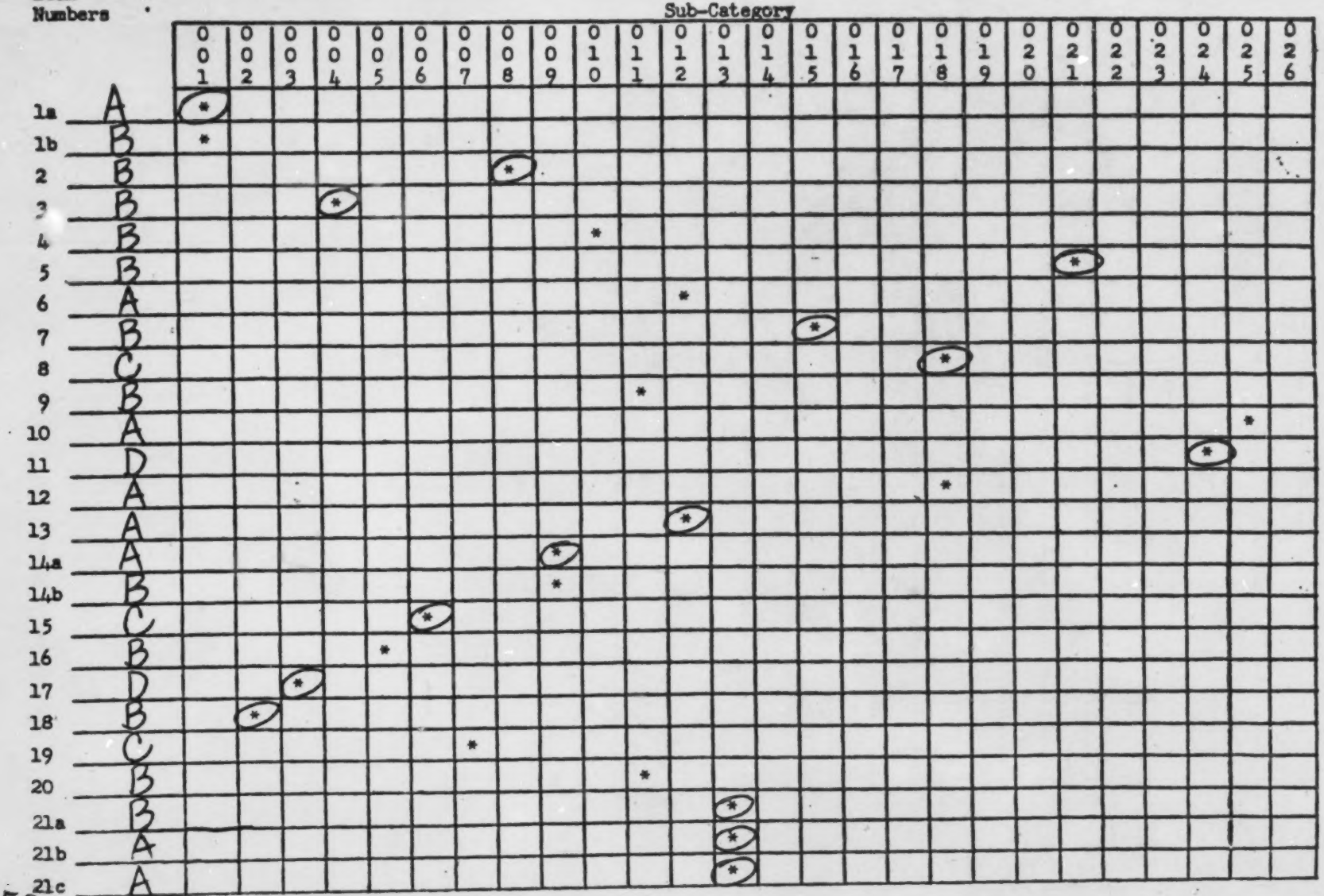
EXAMPLE

STUDENT ANSWER SHEET - SURVEY TEST

Name Hilda Garcia Grade 12 Date 12/4/75



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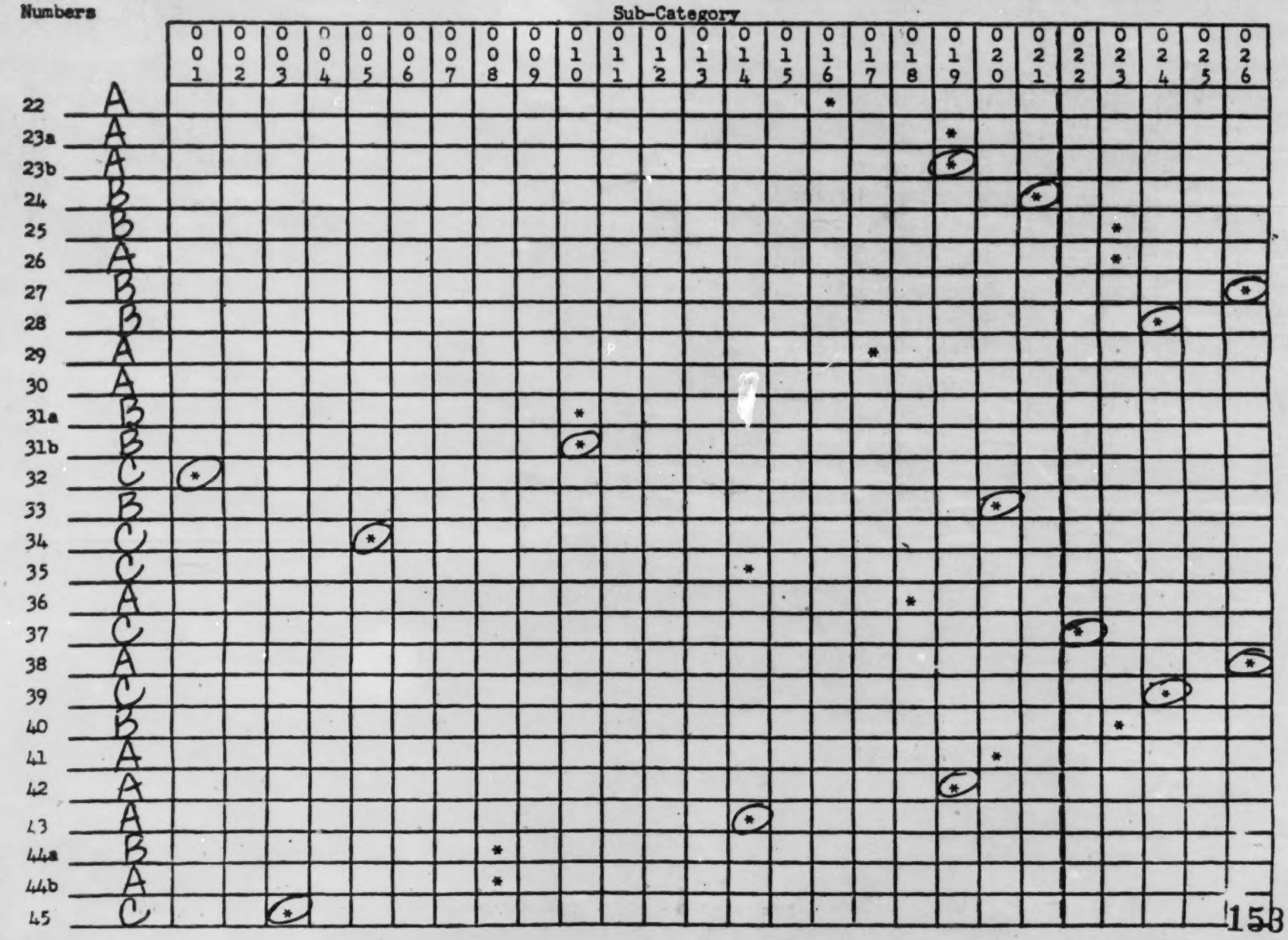
Name Hilda [illegible] Grade 12 Date 12/4/75



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SURVEY TEST - STUDENT SUMMARY SHEET

Name Hilda Garcia Grade 12 Date 12/4/75

Sub-Categories	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
No. of Items	3	1	2	1	2	1	1	3	2	3	2	2	3	3	1	1	1	3	3	2	2	1	3	3	1	2
Total Correct	2	1	2	1	1	1	0	1	1	1	0	1	3	1	1	0	0	1	2	1	2	1	0	3	0	2
Performance Criteria	2	1	2	1	2	1	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2	1	2	2	1	2
Area of Concern					✓			✓	✓	✓	✓	✓		✓		✓	✓	✓		✓			✓		✓	
Basic Learner Outcome Tests*	1:03 1:04	1:12	1:02 1:07	2:02	2:01 2:05	2:10	2:07	3:01 3:02	3:07	4:03 4:05 4:07 4:21	4:01 4:08	5:06 5:16	5:10 5:11	5:04 5:09 5:12 5:22 5:24	6:01 6:16	6:05 6:10	6:04	7:02 7:11 7:20 7:21 7:23	7:04 7:05 7:07 7:08	7:13 7:16 7:22	8:02 8:04	8:31	8:08 8:10 8:11 8:20 8:21	8:16 8:17 8:26 8:27	9:01 9:04	9:02 9:09 9:15
Categories	I			II				III		IV		V			VI			VII			VIII				IX	

I. Career Planning and Decision-Making

II. Career and Occupational Information

III. Job Acquisition and Retention

IV. Attitudes and Appreciation

V. Skills in Human Relationships for Careers

VI. Self-Investigation and Evaluation for Career Success

VII. Personal/Work/Societal Responsibilities

VIII. Economic Factors Influencing Career Opportunity

IX. Education/Career Opportunity Relationships

* There are 63 Basic Learner Outcome Tests which correspond with the 63 basic learner outcomes in the Career Education Measurement Series.

STUDENT ANSWER SHEET - SURVEY TEST

Name _____ Grade _____ Date _____

Item Numbers	Sub-Category																									
	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
1a	*																									
1b	*																									
2								*																		
3				*																						
4										*																
5																					*					
6												*														
7															*											
8																		*								
9											*															
10																									*	
11																								*		
12																		*								
13												*														
14a									*																	
14b									*																	
15						*																				
16					*																					
17			*																							
18		*																								
19							*																			
20											*															
21a													*													
21b													*													
21c													*													

Name _____ Grade _____ Date _____

Item Numbers

Sub-Category

	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
22																*										
23a																			*							
23b																			*							
24																					*					
25																							*			
26																							*			
27																										*
28																								*		
29																	*									
30														*												
31a										*																
31b										*																
32	*																									
33																				*						
34					*																					
35														*												
36																		*								
37																						*				
38																										*
39																								*		
40																							*			
41																				*						
42																			*							
43														*												
44a								*																		
44b								*																		
45			*																							

SURVEY TEST - STUDENT SUMMARY SHEET

Name _____ Grade _____ Date _____

Sub-Categories	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026
No. of Items	3	1	2	1	2	1	1	3	2	3	2	2	3	3	1	1	1	3	3	2	2	1	3	3	1	2
Total Correct																										
Performance Criteria	2	1	2	1	2	1	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2	1	2	2	1	2
Area of Concern																										
Basic Learner Outcome Tests*	1:03 1:04	1:12	1:02 1:07	2:02	2:01 2:05	2:10	2:07	3:01 3:02	3:07	4:03 4:05 4:07 4:21	4:01 4:08	5:06 5:16	5:10 5:11	5:01 5:09 5:12 5:22 5:24	6:01 6:16	6:05 6:10	6:04	7:02 7:11 7:20 7:21 7:23	7:04 7:05 7:07 7:08	7:13 7:16 7:22	8:02 8:04	8:31	8:08 8:10 8:11 8:20 8:21	8:16 8:17 8:26 8:27	9:01 9:04	9:02 9:09 9:15
Categories	I			II				III		IV		V			VI			VII			VIII				IX	

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I. Career Planning and Decision-Making

II. Career and Occupational Information

III. Job Acquisition and Retention

IV. Attitudes and Appreciation

V. Skills in Human Relationships for Careers

VI. Self-Investigation and Evaluation for Career Success

VII. Personal/Work/Societal Responsibilities

VIII. Economic Factors Influencing Career Opportunity.

IX. Education/Career Opportunity Relationships

* There are 63 Basic Learner Outcome Tests which correspond with the 63 basic learner outcomes in the Career Education Measurement Series.

TABLE FOR

CALCULATING PERCENTAGES

NUMBER OF STUDENTS NOT MEETING THE PERFORMANCE CRITERIA

NUMBER OF STUDENTS TESTED

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	0	99																												
2	0	50	99																											
3	0	33	67	99																										
4	0	25	50	75	99																									
5	0	20	40	60	80	99																								
6	0	17	33	50	67	83	99																							
7	0	14	29	43	57	71	86	99																						
8	0	13	25	38	50	63	75	88	99																					
9	0	11	22	33	44	56	67	78	89	99																				
10	0	10	20	30	40	50	60	70	80	90	99																			
11	0	9	18	27	36	45	55	64	73	82	91	99																		
12	0	8	17	25	33	42	50	58	67	75	83	92	99																	
13	0	8	15	23	31	38	46	56	62	69	77	85	92	99																
14	0	7	14	21	29	36	43	50	57	64	71	79	86	93	99															
15	0	6	13	20	27	33	40	47	53	60	67	73	80	87	93	99														
16	0	6	13	19	25	31	38	44	50	56	63	69	75	81	88	94	99													
17	0	6	12	18	24	29	35	41	47	53	59	65	71	76	82	88	94	99												
18	0	6	11	17	22	28	33	39	44	50	56	61	67	72	78	83	89	94	99											
19	0	5	11	16	21	26	32	37	42	47	53	58	63	68	74	79	84	89	95	99										
20	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	99									
21	0	5	10	14	19	25	29	33	38	43	48	52	57	62	67	71	76	81	86	90	95	99								
22	0	5	9	14	18	23	27	32	36	41	45	50	55	59	64	68	73	77	82	87	91	95	99							
23	0	4	9	13	17	22	26	30	35	39	43	48	52	57	61	65	70	74	78	83	87	91	95	99						
24	0	4	8	13	17	21	25	29	33	38	42	46	50	54	58	63	67	71	75	80	83	88	92	96	99					
25	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	99				
26	0	4	7	12	15	19	23	27	31	35	38	42	46	50	54	58	62	65	69	73	77	81	85	88	92	96	99			
27	0	4	7	11	15	19	22	26	30	33	37	41	44	48	52	56	59	63	67	70	74	78	81	85	88	93	96	99		
28	0	4	7	11	14	18	21	25	29	32	36	39	43	46	50	54	57	61	64	68	71	75	79	32	86	89	93	96	99	
29	0	3	7	10	14	17	21	24	28	28	34	34	41	41	45	48	55	55	59	62	66	69	76	79	83	86	90	93	97	99
30	0	3	7	10	13	17	20	23	27	30	33	37	40	43	47	50	53	57	60	60	67	67	73	79	80	83	87	90	93	97	99

EDUCATION/CAREER OPPORTUNITY RELATIONSHIPS

Texas
Career Education Measurement Series

Category 9·Booklet 1

Texas Education Agency
Austin, Texas

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DIRECTIONS FOR MARKING YOUR ANSWERS

GENERAL DIRECTIONS

- Use a pencil to mark your answer sheet. DO NOT use a ballpoint pen.
- If you change your answer, ERASE your first answer completely.
- Each of your marks on your answer sheet should be DARK and should COMPLETELY fill the space for marking.

KINDS OF QUESTIONS

I. Some of the questions in this booklet are followed by a set of answers from which you should choose only ONE answer. Read each of these questions carefully and choose the answer you think is MOST correct. ON YOUR ANSWER SHEET darken the letter that matches the answer you choose.

Read the sample questions below to see how the answers have been marked on your Answer Sheet:

SAMPLE W: In your Test Booklet one item would look like this:

1. Which city is the capital of the United States?

(A) New York City
(B) Philadelphia
(C) Washington, D.C.
(D) Arlington

(C) is the correct answer. On the Answer Sheet the (C) space is darkened. Notice that the mark is dark and completely fills the space.

SAMPLE X: In your Test Booklet one item would look like this:

2. Which of the following is the BEST reason for obeying traffic rules?

(A) You are told you must.
(B) Your friends obey the rules.
(C) You will be called a good citizen.
(D) Your own safety is important.

(D) is the correct answer. On the Answer Sheet the (D) space is darkened.

SAMPLE Y: In your Test Booklet one item would look like this:

3. Susan wanted to be dressed just right for an important date. Of the following persons, who would be the LEAST likely to help Susan pick the right thing to wear?

(A) A friend
(B) A stranger
(C) Her father
(D) Her boyfriend

(B) is the correct answer. On the Answer Sheet the (B) space is darkened.

II. Some of the questions in this booklet have several parts that require you to darken either an (A) or a (B). Read each of the items carefully and decide whether (A) or (B) is correct for each part. ON YOUR ANSWER SHEET darken either the (A) or (B), whichever you think is correct.

Read the sample question below to see how the answers have been marked on your Answer Sheet.

SAMPLE Z: In your Test Booklet the item would look like this:

1. Darken (A) for those things which are flowers. Darken (B) for the others.

(A)	*(B)*	*a. tulip*
(A)	*(B)*	*b. car*
(A)	*(B)*	*c. rose*

On the Answer Sheet the (A) spaces are darkened for parts "a" and "c." The (B) space is darkened for part "b."

1. A group of similar courses is sometimes called a program of study. Which ONE of the following programs would probably be MOST helpful if you wanted a career in construction?

   (A) general science
   (B) vocational office education
   (C) industrial arts
   (D) physical education

2. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into secretarial work after graduating from high school?

   (A) computer programming
   (B) American literature
   (C) typing
   (D) accounting

3. Select the program which would be the MOST helpful in assisting someone to get a job immediately after high school graduation.

   (A) advanced science
   (B) advanced art
   (C) business education
   (D) physical education

4. Which ONE of the following courses would probable by MOST helpful to you if you wished to be a bank clerk after graduating from high school?

   (A) chemistry
   (B) bookkeeping
   (C) home economics
   (D) American literature

5. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into farming after graduating from high school?

   (A) general science
   (B) industrial arts
   (C) vocational agriculture
   (D) geography

6. If your career goal is to become a builder and developer of homes, which of the following IS NOT a reason why you need geometry?

   (A) to determine the square footage of the homes
   (B) to calculate the pitch of the roof
   (C) to draw or read the blue prints of the homes
   (D) to figure the payroll of your employees

7. Darken (A) for each of the following subjects which WOULD help an individual achieve the career goal as manager of a retail store. Darken (B) for each subject which WOULD NOT help one achieve that career goal.

   (A) (B) a. general business
   (A) (B) b. speech
   (A) (B) c. distributive education
   (A) (B) d. general math
   (A) (B) e. English

8. To be a legal secretary, one need NOT be able to

   (A) answer the phone courteously.
   (B) understand some legal terms.
   (C) recognize the usage of good English grammar.
   (D) defend sections of a legal document.

9. Which ONE of the following school learning experiences would MOST improve an individual's ability to pursue a career in advertising?

   (A) creative writing
   (B) general math
   (C) typing
   (D) history

10. Jayne would like to become a professional actress. Which of the learning experiences below will require Jayne to make changes in her behavior in order to become a successful actress?

    (A) She forgot her lines in a school play frequently.
    (B) She was never late for rehearsals.
    (C) She enjoyed helping the other actors with their make-up.
    (D) She met the foreign language requirements.

11. Matt has always looked forward to becoming a professional baseball player. Which of the statements below describe a school experience that would be the LEAST likely to affect Matt's career decision?

(A) He played thirteen of the fifteen games this season.
(B) He wrote a research paper on the history of baseball.
(C) He placed in three out of four golf tournaments.
(D) He participated on the prom decoration committee.

12. John assisted the physics teacher in the school's electronics laboratory for two years during high school. John has obtained a degree in electrical engineering and now operates an experimental laboratory for a research company. Which statement BEST describes John's high school experiences?

(A) had no effect on his career choice
(B) gave him the opportunity to explore his interests in electronics
(C) encouraged him to change his career plans
(D) insured that he would follow a career in the field of physics

13. Janice Lane received a grant to work in a medical laboratory the summer after she got out of high school. In addition to a scholarship, she received an expense-paid trip to Dallas to attend a meeting of the American Cancer Society, where outstanding scientists reported on their recent work. Which ONE is the MOST LIKELY reason that Janice was sent to the meeting?

(A) to stimulate her interest in cancer research
(B) so she would know who in Texas was working on cancer research
(C) to show her that her ideas are just as good as anyone else's

14. Reading the editorial sections of newspapers will give you

(A) individuals' views on various issues
(B) factual information only
(C) the best information available on various issues

15. Charles Morgan is a student teacher. Every day after his classes he and the teacher discuss his performance. Which of the following is the BEST reason for him to listen to the teacher's comments concerning his work?

(A) He could learn better ways of getting certain points across to the students.
(B) He needs to learn the students' names.
(C) The teacher will always want to point out his errors.
(D) The teacher doesn't have time to talk to him during the day.

16. Gary has just started to work as a mechanic in a motorcycle repair shop. Which statement IS NOT a good reason for Gary to ask questions on his new job?

(A) If Gary asks questions, he will learn more about motorcycles.
(B) Asking questions may keep Gary from making mistakes.
(C) If Gary asks questions, his boss will think that he does not know enough about his job.
(D) Gary will be able to do his work better if he asks for advice when he has a problem that he cannot solve.

17. Which is the BEST reason for students to ask questions in class?

(A) to show teachers that they are paying attention
(B) to gain information that they feel they need
(C) to make them appear smarter than the other students
(D) to keep the teacher from moving on to a topic in which the class is not interested

18. Larry Farrell has a part-time job mixing chemicals in a photography laboratory. He is getting ready to mix a new film developer, but he thinks that there is a mistake in the directions on the package.

Which statement below is the BEST reason Larry should ask questions?

(A) Larry will get a reward from the chemical company.
(B) Larry will be able to speed up the development process.
(C) If the developer is mixed incorrectly, Larry may ruin the film that he is supposed to develop.
(D) Larry will get an extra break from his work, while the boss checks the directions.

BASIC LEARNER OUTCOME TESTS
ADMINISTRATION AND USE INFORMATION

There are separate tests for sixty-three basic learner outcomes. The top, "fold-over" section of each test shows the career education sub-category and the specific basic learner outcome to which the test applies. There is a scoring key showing the correct answers to the questions and "passing" scores considered to be appropriate for students in grades 8 through 10. Somewhat higher "passing" scores are shown for students in grades 11 and 12.

Completion time for the learner outcome tests varies from five to twenty minutes; however, no time limit should be imposed. Students should be permitted to complete all of the test questions. Teachers may administer the tests or test questions in one of several ways. For example:

1. One or any combination of the tests may be administered to find out whether classroom activities are developing the behaviors described by the outcome statement(s). If this method is used the passing scores shown on the test(s) are appropriate.
2. One or more of the tests may be combined with teacher-made tests which cover the ongoing curriculum topics into which the learner outcome(s) have been infused. The passing scores shown on the test(s) are also appropriate for this method.
3. Test questions from one or more of the tests may be combined with teacher-made subject matter tests. This method permits the teacher to identify test items that more directly address the classroom activities conducted. in such instances, the teacher should score the learner outcome test questions in the same manner that routine teacher-made tests are scored.

In addition to providing test questions for specific learner outcomes, these tests should be regarded as examples of how other learner outcome behaviors may be measured. Teachers are encouraged to develop test questions to measure student attainment of those outcomes for which questions are not available.

Sub-Category 012: Interpersonal Relationship Skills

Learner Outcome 5:16: The student should understand the benefits of, and necessity for, being sensitive to others.

Total number of correct responses: 13

Scoring Key: 1a—A; 1b—B; 1c—A; 1d—A; 1e—B; 1f—B; 2a—A; 2b—A; 2c—A; 2d—B; 2e—A; 3—A; 4—D

Appropriate number of correct responses: For grades 11 and 12 = 12 correct; For grades 8, 9 and 10 = 10 correct

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CAREER EDUCATION TEST

Learner Outcome 5:16

Student Name _____

Read the following questions or statements and mark the answers you believe to be the most correct.

1. Darken (A) for each situation in which someone is showing thoughtfulness to another person. Darken (B) for each of the other statements.

   (A) (B) a. Paul noticed that Bill was having trouble using the new machine, so he offered to give him a hand.
   (A) (B) b. After Joe read Fran's first magazine article, he told her he thought she had covered the subject poorly.
   (A) (B) c. When Art's father died, Steve sent flowers.
   (A) (B) d. Tom stopped whistling while he was working when he was told it was bothering some people.
   (A) (B) e. Norm ignored Ted whenever Ted tried to talk to him.
   (A) (B) f. Everyone kept giving Diane more work to do, even though they knew she was overworked already.

2. It was Kit's first day on the job. A report had been left on her desk for her to type. She did not know where anything was, and she did not know the standard procedures for typing that kind of report. Everyone seemed to be ignoring her. Her lip began to quiver as she sat staring at the report. Then she heard a voice behind her.

   "I'm Dottie. May I show you what to do?"

   Kit smiled gratefully. "Oh, yes, I was beginning to think no one knew I was here."

   Darken (A) for each statement below which describes a **BENEFIT** of Dottie's thoughtfulness toward Kit on her first day. Darken (B) for each one that **DOES NOT**.

   (A) (B) a. Kit will be able to do her work.
   (A) (B) b. Kit will feel that she can ask Dottie questions.
   (A) (B) c. Kit will adjust better to the office routine.
   (A) (B) d. Kit will not be given so much work to do.
   (A) (B) e. Dottie will help Kit feel more comfortable.

3. Ann, the head of the department, has prepared a long report which must be typed as soon as possible. She thinks that giving the report to Sylvia, a typist, may cause her to have more work than she can do. Ann calls Sylvia into her office and explains why it is important that the typing task be completed quickly. Sylvia looks at the report and estimates how much time will be required in order to get the job done. Ann asks if Sylvia would like for her to ask other typists to help with the work.

   Which statement **BEST** describes a possible benefit of Ann's sensitivity to Sylvia's overload of work?

   (A) Sylvia would probably do a better job because Ann seemed to care about her feelings.
   (B) Sylvia would think Ann unfair.
   (C) Sylvia would not do the job any better because Ann explained the task and the reasons for it.
   (D) Sylvia would do the work but would be angry.

4. The production department always seemed to be working under pressure. Deadlines would come and members of the staff would have to concentrate their full efforts on finishing the job on time. It was one of those days when Marie had a stack of work which would take a full day of uninterrupted time to complete. During the day other people needed to ask Marie questions, but when they did she snapped at them irritably. "Can't you see I'm busy?" she had growled at Jim. As Jim turned away, he had replied, "We all have deadlines too." Which **ONE** of the following would be the **BEST** way to avoid this situation in the future?

   (A) Everyone should do his own work and not ask any questions.
   (B) Jim should avoid any contact with Marie in the future.
   (C) Marie should not be given any work which involves deadlines.
   (D) Marie should try to be more sensitive to others.

(Cut here for reproduction)

Student Questionnaire on Guidance Services

The purpose of this questionnaire is to determine how you feel about the guidance/counseling services offered by your school. Please express your true feelings by answering the questions below as honestly as you can. This is not a tes so there are no right or wrong answers.

Circle your response to each statement.

School _____

Grade: 8 9 10 11 12 Sex: M F

I consider myself to be an: A B C D student

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
1. My school counselor has encouraged me to think about what I am going to do when I finish high school.	SA	A	U	D	SD
2. I have been helped to plan the elective subjects and activities I need and want to take while I am in school.	SA	A	U	D	SD
3. Before I entered tenth grade, I was given help to plan my high school program.	SA	A	U	D	SD
4. I have had opportunities to take career interest tests and surveys during my high school years.	SA	A	U	D	SD
5. I can readily get help from my counselor in considering information about myself as it relates to my future educational and vocational plans.	SA	A	U	D	SD
6. Counselors have encouraged my parents to discuss my future educational and/or vocational plans with them.	SA	A	U	D	SD

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
7. I am generally satisfied with the career/ vocational counseling services I obtain at school.	SA	A	U	D	SD
8. My counselor has been influential in my decision of high school courses.	SA	A	U	D	SD
9. Many of my classes include units and activities which encourage me to investigate different career interests.	SA	A	U	D	SD
10. My counselors and teachers encourage me to investigate personal and education requirements for occupations I have considered.	SA	A	U	D	SD
11. My school provides me an opportunity to discuss part-time and summer employment with a job counselor.	SA	A	U	D	SD
12. The guidance and counseling services available at my school have been adequately explained to me.	SA	A	U	D	SD
13. There is a large supply of printed and visual career information available to me at my school.	SA	A	U	D	SD
14. I have received help from a school counselor in understanding the meaning of scores of standardized tests I have taken (such as achievement, school ability or aptitude tests).	SA	A	U	D	SD
15. My parents can discuss the results of any aptitude, ability, or achievement tests I have taken with my counselor.	SA	A	U	D	SD
16. Course descriptions were given to me which were clear, concise, and aided me in my course selections.	SA	A	U	D	SD

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
17. Tests and interest surveys I have taken influenced my course selection.	SA	A	U	D	SD
18. My counselor was helpful in my selection of a post-high school educational program (college, technical institute, business school, etc.).	SA	A	U	D	SD
19. Financial aid programs for post-high school training were adequately explained to me in high school.	SA	A	U	D	SD
20. Career days, outside resource people, and guest speakers were adequate in helping me to learn about various career opportunities and requirements.	SA	A	U	D	SD
21. Opportunities in the United States military services were adequately explained to me in high school.	SA	A	U	D	SD
22. I have had opportunities to speak with representatives of various colleges, technical schools, the United States military services, and other post-high school training programs while I have been in high school.	SA	A	U	D	SD
23. Printed materials from my school's guidance department have been useful to me.	SA	A	U	D	SD

Please provide any additional comments you may have about your school's counseling service.

Middle and High School Teacher Survey:

Career Education Evaluation Program

In order to plan and implement future improvements in the school's career education efforts, this questionnaire asks you to relate your use of and opinion of various career education related activities and concepts. The data will be used to assess the strengths and weaknesses of our current career education efforts.

Please give us your candid thoughts. Besides answering the following specific questions, please provide any other comments that you have. Write your comments anywhere on the questionnaire! If a question is confusing or ambiguous, tell us by writing comments in the margin! Don't be bashful. If you feel an important question was not asked, give us the answer any way!

For the purpose of this questionnaire, career education is defined as follows:

> Career education provides students with opportunities to know about all kinds of occupations, to know what their capabilities are, to develop basic skills needed to go into careers, and to make good choices about the careers they wish to follow. Career education helps students develop an appreciation for the world of work.

Please return the questionnaire to _____ when you have finished. If you have questions, please contact _____ at _____.

Thank you for your assistance. It is much appreciated.

Sincerely,

175 _____

Cooperative Education Coordinator

Part I.

What grade levels do you teach? (Check all that apply)

___ (1) 6-7, ___ (2) 8-9, ___ (3) 10, ___ (4) 11, ___ (5) 12

What subject(s) do you teach: (Check all that apply)

___ (1) Art

___ (2) English

___ (3) Foreign Language

___ (4) Home Economics as General Education

___ (5) Industrial Arts as General Education

___ (6) Mathematics

___ (7) Music

___ (8) Physical Education

___ (9) Science

___ (10) Social Studies

___ (11) Special Education

___ (12) Vocational Education

___ (13) Other (please specify)_____

_____

How many years teaching experience do you have?

___ (1) This is my first year

___ (2) 2 - 5 years

___ (3) 6 - 10 years

___ (4) 11 - 20 years

___ (5) 21 years or more

Part II. Importance of Concepts, Skills and Attitudes

Listed below are concepts, skills, or attitudes that some people feel students should understand or develop before leaving high school. Circle the symbol which describes your opinion.

Very Important	Important	Some Importance	Little Importance		It is important that today's high school graduates:
VI	I	S	LI	1.	Have competencies in basic academic skills.
VI	I	S	LI	2.	Recognize that learning is a continous process occurring both in and outside school.
VI	I	S	LI	3.	Recognize the relationship of their interests, aptitudes, abilities, and values to the achievement of personal and career goals.
VI	I	S	LI	4.	Accept and respect their own uniqueness.
VI	I	S	LI	5.	Understand the variety and complexity of careers and career opportunities.
VI	I	S	LI	6.	Understand that personal and career development includes progression through stages of educational and occupational experiences.
VI	I	S	LI	7.	Understand the interdependency of occupations and the ways in which different occupations fulfill societal needs.
VI	I	S	LI	8.	Learn what is involved in the development, training, behavior, and rewards of persons engaged in specific occupations.
VI	I	S	LI	9.	Understand the relationship between career and lifestyle.
VI	I	S	LI	10.	Be aware of the impact of social and technological changes on various occupations.
VI	I	S	LI	11.	Understand the range of social and economic benefits associated with various occupations.
VI	I	S	LI	12.	Understand that all people are consumers and producers throughout their lives.

| Very Important | Important | Some Importance | Little Importance

VI I S LI 13. Understand various labor market trends and the concept of occupational supply and demand.

VI I S LI 14. Understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with one's goals, and taking steps to implement a course of action.

VI I S LI 15. Be proficient in identifying and using resource information in making career and personal decisions.

VI I S LI 16. Identify factors which influence decision making.

VI I S LI 17. Learn to accept responsibility for decisions.

VI I S LI 18. Recognize the basis of various attitudes toward work.

VI I S LI 19. Recognize differences in others and developing tolerance and flexibility in one's interpersonal relationships.

VI I S LI 20. Understand how attitudes based upon prejudice affect behavior of other individuals.

VI I S LI 21. Appreciate the contribution of all workers.

VI I S LI 22. Recognize the implications of working both with and without supervision as well as both independently and with others.

VI I S LI 23. Understand how a person can begin working toward career goals while still in school.

| Very Important | Important | Some Importance | Little Importance

VI I S LI 24. Be aware of the work habits, skills, and attitudes needed for employment.

VI I S LI 25. Recognize that different career directions require various types of educational preparation.

Part III. Current Career Education Activities

Listed below are several activities and methods for presenting Career Education information and concepts to students. Please indicate the extent to which you used each this year. Responses range from Never to 5 or More times during this year.

Activity/Method for Presenting Career Education Information	Extent of Present Use: Never	Once	2 to 4 Times	5 or More
1. Field trips	0	1	2	3
2. Visitors or speakers on careers	0	1	2	3
3. A-V media (slides, films, etc.) emphasizing awareness of self or careers	0	1	2	3
4. Special written materials (brochures, articles, etc.) emphasizing Career Education or knowledge	0	1	2	3
5. Themes, papers or term papers on career education topics	0	1	2	3
6. Educational TV	0	1	2	3
7. Projects on careers and career choice	0	1	2	3

	Activity/Method for Presenting Career Education Information	Extent of Present Use: Never	Once	2 to 4 Times	5 or More
8.	Displays on career education	0	1	2	3
9.	Games (Career Education)	0	1	2	3
10.	Educational Fairs on Careers	0	1	2	3
11.	Role playing jobs	0	1	2	3
12.	Simulated work situations (class runs a business, etc.)	0	1	2	3
13.	Relating language arts to Career Education concepts	0	1	2	3
14.	Relating math skills to various occupations	0	1	2	3
15.	Relating science and health to various occupations	0	1	2	3
16.	Relating social studies to various skills needed in an occupation	0	1	2	3
17.	Relating the arts to occupations and leisure activities	0	1	2	3
18.	Presenting activities to help students identify their interests and skills	0	1	2	3
19.	Interviews, surveys, etc. to help the students become aware of the variety of occupations in their local community	0	1	2	3
20.	Activities to start students thinking about making a career decision	0	1	2	3
21.	Discussed jobs related to topics or units presented in class	0	1	2	3
22.	Encouraged students to think about career selection	0	1	2	3
23.	Involved parents in career education activities	0	1	2	3

Activity/Method for Presenting Career Education Information	Extent of Present Use: Never	Once	2 to 4 Times	5 or More
24. Invited persons from business and industry to present information in class	0	1	2	3
25. Visited a business or industry to find out more about jobs and skills required	0	1	2	3

What other activities could you suggest to increase the career education development of students?

Career Education-Parent Survey

Dear Parents:

Your son/daughter has been asked to deliver this questionnaire to you. Your school district wants your assistance in determining the direction of the district's career education efforts.

Your response to this questionnaire will aid in the district-wide evaluation of career education presently being conducted.

For the purpose of this questionnaire, the following definition of career education is given:

> Career education provides students with opportunities to know about all kinds of occupations, to know what their capabilities are, to develop basic skills needed to go into careers, and to make good choices about the careers they wish to follow. Career education helps students know about the business world and to develop an appreciation for the world of work.

The school district wants and needs your opinions. Besides answering the specific questions, we would like to know any comments or questions you might have. Write your comments anywhere on the questionnaire! If you don't agree with a question, tell us right there in the margin! Don't be bashful, your comments and questions will help us improve this questionnaire!

Signature _____

Directions

Please provide us with your opinion on each of the following statements. Circle the symbol on the left which best describes your viewpoint.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
					Today's high school graduates:
SA	A	N	D	SD	1. Are competent in basic academic skills.
SA	A	N	D	SD	2. Understand the variety and complexity of careers and career opportunities.
SA	A	N	D	SD	3. Recognize that learning is a continuous process occurring in and outside of school.
SA	A	N	D	SD	4. Understand the relationship between career and lifestyle.
SA	A	N	D	SD	5. Are aware of the impact of social and technological changes on various occupations.
SA	A	N	D	SD	6. Understand the many social and economic benefits associated with various occupations.
SA	A	N	D	SD	7. Understand that responsible decision making includes taking action on reasoned choices and accepting the consequences whether good or bad.
SA	A	N	D	SD	8. Are proficient in identifying and using resource information in making career decisions.
SA	A	N	D	SD	9. Have learned to accept responsibility for decisions.
SA	A	N	D	SD	10. Know what work habits, skills and attitudes are needed for employment.

Directions

State how you feel about the school providing the following opportunities for your child before his/her high school graduation.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	The school should provide:
SA	A	N	D	SD	1. Help in developing positive attitude toward self, school, community, and work.
SA	A	N	D	SD	2. Exploration of his/her interest, skills, needs, and values as aids to career planning.
SA	A	N	D	SD	3. Information about a wide variety of occupations in business, government, and industry.
SA	A	N	D	SD	4. Opportunities to visit work sites to gain exposure to the world of work.
SA	A	N	D	SD	5. Help in considering how a career may affect his/her life-style.
SA	A	N	D	SD	6. Opportunities to determine his/her interests and aptitudes through actual or simulated work experience.
SA	A	N	D	SD	7. Placement services upon exit from high school in both employment and further education.

Directions

Mark each of the following statements according to your opinion.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

I believe that

SA A N D SD 1. Our community cannot provide opportunities for all students to have work experience.

SA A N D SD 2. People in the community have the knowledge and ability to make a meaningful contribution to classes.

SA A N D SD 3. Because the school is best suited to provide education, the community should not be involved in helping students prepare for occupations.

SA A N D SD 4. Business people lack the interest and time necessary to provide career information to schools.

SA A N D SD 5. It is the job of trade and vocational schools rather than the public elementary and secondary schools to provide occupational training for youth.

SA A N D SD 6. Academic teachers do not have enough time to integrate career information into school subjects.

SA A N D SD 7. Schools are doing an adequate job of preparing students for the world of work.

SA A N D SD 8. If a person has chosen the career he wants to enter, there is no need to explore other alternatives.

SA A N D SD 9. Since students have a lifetime to prepare for work, they should spend their school time on academic subjects.

SA A N D SD 10. It is difficult to learn an actual occupation without having actual work experience in that occupation.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
					As a parent, in order to help my child with car r education, I need:
SA	A	N	D	SD	1. Opportunities to become familiar with the school's career education activities.
SA	A	N	D	SD	2. Opportunities to become familiar with career education resources, to know what materials are available in my community, and suggestions on how to use them.
SA	A	N	D	SD	3. Opportunities to learn what other parents are doing in career education for their children.
SA	A	N	D	SD	4. Suggestions and examples of how I can provide career education in my home.

Yes	No	Maybe	
			As a parent, in order to help students with career education, I would be willing to:
Y	N	M	1. Take part in career related activities in the school, such as visiting a classroom to discuss my occupation with students.
Y	N	M	2. Attend committee meetings or serve on advisory councils to help establish school policy in regard to career programs for students.

The following information is optional; you do not need to respond.

1. Job Title _____

2. _____ female _____ male

3. Age: _____ under 24 _____ 24-29 _____ 30-39
_____ 40-49 _____ 50-65 _____ over 65

4. Name _____

Address _____

_____

Thank you for your assistance. Please see that this questionnaire is returned to _____ as soon as is convenient. If you have questions or comments you would like answered, please call _____ at _____. She/he will be glad to talk with you.

Sincerely,

_____
Superintendent of Schools

Career Education - Interview Guide

The following suggestions are offered to ease your efforts in conducting the employer interview.

1. Determine sample to be interviewed. The use of the telephone book yellow pages and a random selection technique should easily produce a sample of whatever size you establish. If this is your first career education evaluation effort, you may elect to be selective in your choice of employers. If so, you would do well to include, where possible, representatives from the following firms and agencies:

    Construction
    Financial (banks, savings and loan organizations)
    Hotels, Motels and Restaurants
    Professional (doctors, lawyers, architects, clergy, etc.)
    Public Utilities
    Media (newspapers, print shops, and radio and television stations)
    Retailers
    Services (laundry, auto repair, etc.)
    Agribusiness
    City and County Government
    Federal agencies, including military

Persons from labor not represented above, including local labor unions

Persons operating small businesses

2. Contact the individuals to arrange for the interview, explaining the purposes for the interview and uses to be made of the information.

3. At the beginning of the interview explain <u>what</u> career education is and <u>how</u> it could benefit businesses and the community. You may wish to refer to the following:

> Career education provides students with opportunities to know about all kinds of occupations, to know what their own capabilities are, to develop basic skills needed to go on into careers, and to make good choices about the careers they wish to follow. It helps them know about the business world and to develop an appreciation for the world of work.
>
> There are many reasons why career education is important to business people.
>
> (a) 800,000 young people are graduating from high school every year without any marketable skills.
>
> (b) Many young people are being prepared to go to college although only 2 out of 10 jobs between now and 1980 will require a college degree.

(c) Businesses are having to train young people in the basics they should have received in school.

(d) Many students view the business world with distrust and distaste and need to know more about it.

(e) Poor career choices cause employees to be fitted poorly for jobs and lead to high failure rates and job turnovers.

4. Ask questions directly, asking for clarification when necessary.
5. Encourage comments and record specific information.
6. Be tactful, do not waste employers'time, and thank employer when leaving.

Interview Schedule

Business and Industry

Name and Address of Firm _____

_____

Person interviewed_____

Firm's primary activity_____

_____

Number of employees_____Expected number of new employees needed in the coming year_____

Very Important
Important
Little importance
Not important

How important is it that new employees in your organization:

VI I LI NI 1. Are competent in basic academic skills?

VI I LI NI 2. Recognize the relationship between their interests, aptitudes, abilities, and values and their career goals?

VI I LI NI 3. Understand the relationship between career and lifestyle?

VI I LI NI 4. Learn to accept responsibility for decisions?

VI I LI NI 5. Recognize differences in others and develop a tolerance and flexibility in interpersonal relationships?

VI I LI NI 6. Understand how attitudes based on prejudice affect behavior of other individuals?

VI I LI NI 7. Appreciate the contribution of all workers?

VI I LI NI 8. Are able to work both with and without supervision as well as both independently and with others?

VI I LI NI 9. Are aware of work habits, skills and attitudes needed for employment?

VI I LI NI 10. Have all the skills required for the job for which they are hired?

Agree Strongly
Agree
Neutral
Disagree
Slagree Strongly

From your position in business and industry, what is your opinion regarding each of the following statements:

SA A N D SD 1. Local public schools provide students with enough occupational information for career planning.

SA A N D SD 2. It is the responsibility of the public schools, not business and industry, to train youth for employment.

SA A N D SD 3. Career information should be provided to all students, regardless of their career goals.

SA A N D SD 4. Local schools are doing an adequate job of preparing students for the world of work.

SA A N D SD 5. Local teachers are aware of career resources in the community.

SA A N D SD 6. Individuals who are outstanding in academic achievement will be successful in their chosen careers.

SA A N D SD 7. Students gain an appreciation of the value and importance of work while in school.

SA A N D SD 8. School programs effectively help students decide upon careers.

SA A N D SD 9. Career success is highly dependent upon worker attitudes.

SA A N D SD 10. "Hands-on" work experience is essential for effective career exploration.

In your opinion:

What would be the most important factor to consider when hiring a recent high school graduate?

_____

_____

In your opinion:

What do you consider to be the most important cause of persons to fail in their positions in your firm?

_____

_____

Is your firm presently cooperating with the local schools in any program or activity?_____

If so, what programs:_____

_____

Would you, or someone from your firm, be able to participate in the school's career education program this year?_____

In which of the following ways could your firm participate?

_____ Presentations by employees to school classes.

_____ Part-time student workers (co op program)

_____ Supervised group tours for students?

If so, how many maximum?_____

Minimum age?_____

_____ One-day or half-day programs for students to accompany an individual employee on the job and observe his activity.

_____Provide schools with printed brochures or employment information.

Can you suggest other ways in which your firm could assist the schools' career education program?_____

What are they?_____

_____

_____

_____

Do you have any other comments or suggestions for the schools to consider in their career education evaluations?_____

_____

_____

_____

Do you have any questions that I might answer?

Thank you for your kind cooperation.

Other Measures to Consider

A. Measures indicative of student's abilities, interest and motivation which may be related to career education activities:

1. Absence: full-day, half-day, part-day, or other indicator of frequency and duration of absence.
2. Attendance: frequency and duration when attendance is required or considered optional (as in club meetings, special events, or off-campus activities).
3. Books: number checked out of library, number renewed, numbers reported read.
4. Choices expressed or carried out: vocational, avocational and educational (especially in relation to their judged appropriateness to known physical, intellectual, emotional, social, or interest factors).
5. Disciplinary actions taken: frequency and type.
6. Drop outs: number of students leaving school before completion of program studies.
7. Extracurricular activities: frequency or duration of participation in observable behaviors amenable to classification such as taking part in athletic events, charity drives, cultural activities, and numerous vocational and avocational endeavors.

8. Grade Point Average: including course work in academic as well as in non-academic programs.
9. Homework assignments: punctuality of completion; quantifiable judgments of quality such as class marks.
10. Leisure activities: numbers and types of; time spent in; awards and prizes received in participation.
11. Library card: possessed or not possessed.
12. Peer group participation: frequency and duration of activity in what are judged to be socially acceptable and socially unacceptable behavior.

B. Possible measures indicative of teacher's behavior and motivation related to career education.

1. Articles: frequency and types of articles written for local distribution concerning program activities.
2. Attendance: frequency of, at professional meetings or at inservice training programs, institutes, summer schools, colleges and universities (for advanced training) from which inferences can be drawn regarding the professional person's desire to improve abilities.
3. Contacts: with parents, school staff and community members in relation to school programs or curriculum development.
4. Field trips: number, type, and frequency of field trips organized and implemented by teacher during the school year.

5. Invited speakers: number, type and frequency of employers, workers, or community residents invited to participate in class activities.
6. Mail: frequency of correspondence providing help or information to others, or seeking information, material, or advice concerning program or curriculum.
7. Professional memberships held: including positions held and committee participation.

C. Indicators of community support in relation to career education programs:

1. Alumni participation: numbers of visitations to school, extent of involvement in PTA activities, amount of support of a financial or service nature to a school, program, or activity.
2. Attendance: frequency of attendance at special school events, at meetings of the Board of Education, or other activities by parents.
3. Conferences sought by parents: frequency of parent-teacher, parent-counselor, and parent-administrator conferences requested.
4. Conferences sought by school: percentage of requested conferences attended by parents.
5. Interviews: percentage of community members susceptible to interviews related to school programs.

6. Letters or telephone requests: frequency of requests for information, materials, and services.
7. Letters: frequency of praiseworthy or critical comments about school programs, services, or about personnel.
8. Parental response to school request: frequency of compliance by parents, to written or oral request for comments.
9. Telephone cal_s from parents, alumni, public media: frequency of calls related to program activities, both positive and negative in nature.

Appendix II

Several published career education assessment instruments are outlined in this appendix. Published surveys offer the career education evaluation advantages in that they typically have had considerable time spent in their development and field testing. Norms are usually established and frequently the test publisher provides scoring and sophisticated data analysis. But by far, the two most important reasons for use of published tests are their (1) established validity and reliability and (2) their provision for group comparison of scores.

It is suggested that examination kits be requested from the test publisher for your review before definitely deciding whether or not to use a particular test series. With the exception of Instructional Objectives Exchange (their tests are on spirit masters), most publishers provide examination or specimen sets for $5.00 or less. These kits provide sample instruments as well as administration and scoring procedures. Also included is a test manual which provides test development information and identifies the basic constructs behind the instrument, includes data on validity, reliability and suitability, and provides group normative data.

All-in-all, if funds are available, it is wise to use existing published tests whenever they can provide the information needed in your career education evaluation. Take advantage of the efforts expended by these professional test makers whenever possible. There is no need for you to re-invent the wheel!

ASSESSMENT OF CAREER DEVELOPMENT

Authors: Dale Prediger, John Roth, Bert Westbrook

Publisher: Houghton Mifflin Company
666 Miami Circle, N. E.
Atlanta, Georgia 30324
(404) 262-1500

Grade Levels: 8 - 11

Administration Time: 125 minutes or three 45 minute sessions

Administration: Written, uses test booklets and separate answer sheets. Cannot be scored locally except by special arrangement: summary data for five subscales and 42 additional items are reported.

Cost:

Test Booklets:	35 - $15.21
Answer Sheets:	35 - $ 4.74
Introduction to ACD	35 - $5.40
Scoring service per student	$ .84
Minimum Scoring Charge	$42.00

Remarks: The Assessment of Career Development (1) elicits information to aid counselors in designing effective career guidance programs tailored to student needs, and (2) summarizes the career development status of student groups to facilitate assessing program outcomes.

The ACD contains 267 items structured around the primary aspects of career development: self-awareness, occupational awareness, and career planning and decision making. Besides knowledge, the test covers the student's involvement in career planning, their exploratory experiences, and the students' reaction to career guidance experiences.

Box Score: Occupations and Careers Information

Authors:	S. Norman Feingold, Sol Swerdloff, and Joseph E. Barber
Publisher:	Chronicle Guidance Publications, Inc. Moravia, N. Y. 13118
Grade Levels:	7 - 12
Administration time:	50 minutes
Administration:	Written; instructor may provide reading assistance. Designed to be graded by hand by teacher or student.
Cost:	Not available
Remarks:	The Occupations and Careers Information Boxscore is designed to provide teachers and counselors an approximation of student's awareness of occupational knowledge. Available in two series, A and B, it can be used to evaluate the effectiveness of instruction in career education by observing performance of several grades in successive years. Boxscores have been designed as criterion referenced tests, the content of which is related to the items listed in Guidelines for the Preparation and Evaluation of Career Information Media, National Vocational Guidance Association, 1971.

Career Awareness Inventory

Author: LaVerna M. Fadale

Publisher: Scholastic Testing Service
480 Meyer Road
Bensenville, IL 60106

Grade Levels: Elementary, 3 - 6; Advanced, 7 - 12

Administration time: Seven Parts, total time 60 - 90 minutes

Administration: Non-timed instrument, suggested that the inventory be administered orally. May be machine or hand scored, designed to be used with standard NCS answer sheets.

Cost:

20 Booklets, 1 Manual, 1 Scoring Booklet	$13.00/pkg.
Package of 50 Answer Sheets	$ 8.50/pkg.

Remarks: The instrument is intended as a tool for classroom teachers and other educators interested in assessing the career awareness of students. It is based on the career awareness element of the Comprehensive Career Education School-Based Model.

Career Development Inventory

Authors: Donald E. Super, Albert S. Thompson and Others

Publisher: Copyrighted, but not yet published. Qualified persons wishing to use it experimentally will be authorized to reproduce the CDI for their own use upon agreeing (1) to make resulting data available for use by the authors, and (2) to use the published version once it becomes available.

Available from: Albert S. Thompson
Box 205 Teachers College
Columbia University
New York, New York 10027

Grade Levels: Separate versions for High School, College, and Adult.

Administration time: High School form requires about 40 minutes to complete.

Administration: Written responses on machine or hand scoreable answer sheets. Reusable test booklets.

Costs: $3.00 charge for each specimen set to cover costs and an additional $5.00 for the test manual.

Remarks: The Career Development Inventory is designed to measure the manner in which adolescents cope with vocational development tasks. In relation to that content, it can be useful in program evaluation, assessment of curriculum development, and individual counseling.

CAREER MATURITY INVENTORY

Author: John O. Crites, University of Maryland

Publisher: CTB/McGraw Hill
Del Monte Research Park
Monterey, California 93940

Grade Levels: 7 - 12; items should be presented orally to those students who are not able to read at the sixth grade level.

Administrative time: 2 - 1/2 hours total; each of the six parts requires approximately 25 minutes.

Administration: Written; however, for those not reading at 6th grade level, items may be presented orally. Can be scored locally or commercially.

Cost: Test booklets (package of 35) - $20.00
Answer sheets (package of 35) - $ 4.00

Remarks: The author suggests using the CMI attitude scale to study career development, screen for career immaturity, assess guidance needs, and to evaluate career education. The CMI also has a five part series of competence tests designed to measure cognitive components of career maturity.

Career Orientation Battery

Author: New Educational Directions

Publisher: New Educational Directions, Inc.
Box 307, Crawfordsville, Indiana 47933
(317) 362-8877

Grade Levels: 2 - 12

Administration time: Can be completed in one class period

Administration: Forms 5 - 8 and 9 - 12 are written, form 2 - 4 may be read to the students by the teacher. The answer sheets are hand scoreable; data analysis services are also available.

Cost: Test booklets: (packet of 30) $15.00
Scoring: $35.00 base rate plus 15 cents/student. These costs include postage, instructions, and scale descriptions. Separate answer sheets are included with test booklets for forms 5 - 8 and 9 - 12; additional answer sheets are available at $1.00/30 sheets.

Remarks: The Career Orientation Battery is correlated with the USOE Learner Outcomes. The 2nd through 4th grade form has five scales: Sex Equality, Work Attitudes, Attitudes Toward Learning, Self Assessment, and Career Knowledge. The 5th through 8th grade form adds a 6th scale, Career Planning, while the 9th through 12th grade form adds a 7th scale, Job Seeking Skills, and modifies the other six scales for use at the high school level.

COGNITIVE QUESTIONNAIRE FOR CAREER EDUCATION

Authors:	Billie T. Rader, Karin Nelson, Scott G. Anderson, John D. Skinkle
Publisher:	Minnesota Research Coordinating Unit for Vocational Education University of Minnesota Minneapolis, Minnesota 55455
Grade Levels:	1 - 3; 4 - 6; 7 - 9
Administration Time:	30 - 45 minutes
Administration:	Grades 1 - 3: items read to student by teacher Grades 4 - 6: student reads and responds to items Grades 7 - 9: student reads and responds to items Hand scoring and optical scoring possible.
Costs:	K - 3: 1 booklet which tests 10 students - $3.00 4 - 6: 1 booklet - .50 7 - 9: 1 booklet - .50 Manual - 1.00 Specimen Sets - 4.00
Remarks:	Test measures areas of occupational information.

Comprehensive Tests of Basic Skills

Authors: McGraw Hill

Publisher: CTB/McGraw-Hill
Del Monte Research Park
Monterey, CA 93940
(408) 649-8400

Grade Levels: K - 12

Administration time: Lowest levels, K - 2 approximately 2 ½ hours; higher levels approximately 4 ½ hours.

Administration: Forms available for either machine or hand scoring. Machine scoring forms available for IBM or Digitek processing equipment or CTB/McGraw-Hill scoring.

Cost: Prices vary depending upon grade level and type of scoring, hand/machine.

Test booklets	$16.00 to $28.70/35
Answer sheets	$ 5.50/50 - IBM
	$11.20 to $17.50/35 CTB forms
Hand scoring stencils	$2.75 each

Remarks: The CTBS is a comprehensive achievement test capable of measuring student knowledge of various broad areas of the curriculum. The battery measures attainment of language, number, and problem solving skills used in school and for everyday needs out of school. Four forms are available S, T, Q, and R with seven levels available for form S and four levels available for each form T, Q, and R.

COOPERSMITH SELF-ESTEEM INVENTORY

Author: Stanley Coopersmith

Publisher: Self Esteem Institute
934 Dewing Avenue
Lafayette, California 94549

Grade Levels: Age 9 to adult

Administration time: Suggested time for Form A: 12 mimutes
Suggested times for Forms B & C: 6 minutes

Administration: The SEI has three forms: Forms A, B, and C. Form C (25 items) was designed for older (adult) groups. Form B is a short form revision of Form A (25 items vs. 58 items). Subjects read items and check response as either "like me" or "unlike me." Instrument is hand scored.

Costs:

SEI Form A:	$30/100
SEI Forms B & C:	$28/100
Scoring Keys:	$ 1.00 each

Remarks: The scale measures evaluative attitudes toward self in social, academic, family and personal areas of experience.

DIFFERENTIAL APTITUDE TESTS with Career Planning Program

Authors:	George K. Bennett	Alexander G. Wesman
	Harold G. Seashore	Donald E. Super(Career Planning Program)
Publisher:	The Psychological Corporation 757 - 3rd Avenue New York, N. Y. 10017	
Grade Levels:	8 - 12	
Administration time:	235 minutes	
Administration:	Written; can be scored locally or commercially.	
Costs:	Test booklets (package of 25) - $18.50 Answer sheets (package of 50) - $12.50 (IBM and Op Scan) Answer sheets (package of 50) - $11.00 (NCR)	
Remarks:	Career Planning Program is currently formulated on an individual student basis; publisher is prepared to offer a group summary of findings.	

High School Minimal Competency Tests

Author: Instructional Objectives Exchange

Publisher: Instructional Objectives Exchange
Box 24095
Los Angeles, CA 90024

Grade Levels: 11 - 12

Administration time: 45 minutes for each of three tests

Administration: Written

Costs: Not given

Remarks: Available in 1978, this series will provide high school minimal competency tests in the areas of reading, writing and arithmetic. These tests are designed to cover the full range of competencies judged to be survival skills. The tests include real-life content such as job applications, safety warnings, newspapers, checkbooks, and tax forms.

HOW I SEE MYSELF SCALE

Author: Ira J. Gordon
The University of North Carolina at Chapel Hill
Peabody Hall 037A
Chapel Hill, N. C. 27514

Grade Levels: 3 - 12

Administration time: Untimed; 40 item elementary form and 42 item secondary form. No approximate time suggested. Probably 20 - 30 minutes.

Administration: Two forms; elementary and secondary. It is recommended that for younger students (grades 3, 4) each scale item be read separately and that each child understands the words and rating system. For older children, directions are given and each child reads and responds to each item. Can be hand scored.

Cost: Tests: $ .10
Manual: $1.00

Remarks: Test measures self-esteem.

NEW MEXICO CAREER EDUCATION TEST SERIES

Authors: Charles C. Healy Stephen R Klein

Publisher: Monitor
P. O. Box 2337
Hollywood, California 90028

Grade Levels: 9 - 12

Administration time: Test series consists of seven scales, 20 minutes per scale. Tests can be administered separately or as a total battery.

Administration: Written, may be machine or hand scored.

Cost: For each subtest:

Test Booklet:	35 - $8.50; 100 - $22.50
Answer Sheet:	35 - $2.00; 100 - $ 4.50
Scoring Stencil:	$1.00 each

Remarks: The NMEDS is a series of seven scales designed to assess student achievement in the progress toward goals and objectives of career education programs. The criterion-referenced tests assess: attitude toward work, career planning (two forms), occupational decision-making, knowledge of occupations, job application procedures, and job holding and advancement skills.

School Sentiment Index (Attitude Toward School)

Author: Instructional Objectives Exchange

Publisher: Instructional Objectives Exchange
Box 24095
Los Angeles, CA 90024

Grade Levels: Elementary and Secondary level

Administration time: Not given

Administration: Written, special form for pre-readers. Scored manually.

Cost:

Elementary set of 22 test measures, approximately 45 spirit masters	$25.00
Secondary set of 13 test measures, approximately 25 spirit masters	$25.00

Remarks: Two separate Attitude Toward School test sets are available, each containing the School Sentiment Index. Both test inventories are designed to evaluate students' attitudes or perceptions in relation to each of the following six dimensions: learning, peer social behavior, class operation, classroom physial environment, learning stimuli, and school subjects.

Since the tests are provided in spirit master form, it allows for inexpensive production of up to 300 copies of the test instrument.

Appendix III

Random Number Table

Table D.2 Random numbers[*]

	00–04	05–09	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49
00	54463	22662	65905	70639	79365	67382	29085	69831	47058	08186
01	15389	85205	18850	39226	42249	90669	96325	23248	60933	26927
02	85941	10256	82141	02015	13858	78030	16269	65978	01385	15345
03	61149	69440	11286	88218	58925	03638	52862	62733	33451	77455
04	05219	81619	10651	67079	92511	59888	84502	72095	83463	75577
05	41417	98326	87719	92294	46614	50948	64886	20002	97365	30976
06	28357	94070	20652	35774	16249	75019	21145	05217	47286	76305
07	17783	00015	10806	83091	91530	36466	39981	62481	49177	75779
08	40950	84820	29881	85966	62800	70326	84740	62660	77379	90279
09	82995	64157	66164	41180	10089	41757	78258	96488	88629	37231
10	96754	17676	55659	44105	47361	34833	86679	23930	53249	27083
11	34357	88040	53364	71726	45690	66334	60332	22554	90600	71113
12	06318	37403	49927	57715	50423	67372	63116	48888	21505	80182
13	62111	52820	07243	79931	89292	84767	85693	73947	22278	11551
14	47534	09243	67879	00544	23410	12740	02540	54440	32949	13491
15	98614	75993	84460	62846	59844	14922	48730	73443	48167	34770
16	24856	03648	44898	09351	98795	18644	39765	71058	90368	44104
17	96887	12479	80621	66223	86085	78285	02432	53342	42846	94771
18	90801	21472	42815	77408	37390	76766	52615	32141	30268	18106
19	55165	77312	83666	36028	28420	70219	81369	41943	47366	41067
20	75884	12952	84318	95108	72305	64620	91318	89872	45375	85436
21	16777	37116	58550	42958	21460	43910	01175	87894	81378	10620
22	46230	43877	80207	88877	89380	32992	91380	03164	98656	59337
23	42902	66892	46134	01432	94710	23474	20123	60137	60609	13119
24	81007	00333	39693	28039	10154	95425	39220	19774	31782	49037
25	68089	01122	51111	72373	06902	74373	96199	97017	41273	21546
26	20411	67081	89950	16944	93054	87687	96693	87236	77054	33848
27	58212	13160	06468	15718	82627	76999	05999	58680	96739	63700
28	70377	42866	24969	61210	76046	67699	42054	12696	93758	03283
29	91522	74358	71659	62038	79613	79169	44741	05437	39038	13163
30	42626	86819	85651	88678	17401	03252	99547	32404	17918	62880
31	16051	33763	57194	16752	54450	19031	58580	47629	54132	60631
32	08244	27647	33851	44705	94211	46716	11738	55784	95374	72655
33	59497	04392	09119	89964	51211	04894	72882	17805	21896	83864
34	97155	13428	40293	09985	58434	01412	69124	82171	59058	82859
35	98409	66162	95763	47420	20792	61527	20441	39435	11859	41567
36	45476	84882	65109	96597	25930	66790	65706	61203	53634	22557
37	89300	69700	50741	30329	11658	23166	05400	66669	48708	03887
38	50051	95137	91631	66315	91428	12275	24816	68091	71710	33258
39	31753	85178	31310	89641	98364	02306	24617	09609	83942	22716
40	79152	53829	77250	20190	56535	18760	69942	77448	33278	48805
41	44560	38750	83635	56510	61900	42912	13953	79149	18710	68618
42	68328	83378	63369	71381	39564	05615	42451	64559	97501	65747
43	46939	38689	58625	08342	30459	85863	20781	09284	26333	91777
44	83544	86141	15707	96256	23068	13782	08467	89469	93842	55349
45	91621	00881	01900	54221	46177	55309	17852	27491	89415	23466
46	91896	67126	04151	03795	59077	11848	12630	98375	52068	60142
47	55751	62515	21108	80830	02263	29303	37204	96926	30506	09808
48	85156	87689	95493	88842	00664	55017	55539	17771	69448	87530
49	07521	56898	12236	60277	39102	62315	12239	07105	11844	01117

[*] Reproduced by permission from George W. Snedecor, *Statistical Methods*, 5th ed. (The Iowa State University Press, Ames, Iowa, 1956).

50–54	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95–99
59391	58030	52098	82718	87024	82848	04190	96574	90464	29065
99567	76364	77204	01615	27062	96621	43918	01896	83991	51141
10363	97518	51400	25670	98342	61891	27101	37855	06235	33316
86859	19558	64432	16706	99612	59798	32803	67708	15297	28612
11258	24591	36863	55368	31721	94335	34936	02566	80972	08188
95068	88628	35911	14330	33020	80428	39936	31855	34334	64865
54463	47237	73800	91017	36239	71824	83671	39892	60518	37092
16874	62677	57412	13215	31389	62233	80827	73917	82802	84420
92194	63157	76593	91316	03505	72389	96363	52887	01087	66091
15669	56689	35682	40844	53256	81872	35213	09840	34171	74441
99116	75486	84989	23476	52967	67104	39495	39100	17217	74073
15696	10703	65178	90637	63110	17622	53988	71087	84148	11670
97720	15369	51269	69620	03388	13699	33423	67533	13269	56720
11666	13841	71681	98000	35979	39719	81899	07449	47985	46967
71628	73130	78783	75691	41632	09847	61547	18707	85489	69944
40301	51089	99943	91843	41995	88931	73631	69361	05375	15417
22518	55576	98215	82068	10793	86211	36584	67466	69373	40054
75112	30485	62173	02132	14878	92379	22281	16783	86352	00077
80327	02671	98191	84342	90813	49268	95441	15496	20168	09271
60251	45548	02146	05597	48228	81366	34598	72856	66762	17002
57430	82270	10421	05540	43648	75888	66049	21511	47676	33444
73528	39559	34434	88596	54086	71693	43132	14414	79949	85193
23991	65959	70769	64721	86413	33475	42740	06175	82758	66248
78388	16638	09134	59880	63806	48472	39318	35434	21057	74739
12477	09965	96657	57994	59139	76330	24596	77515	09577	91871
83266	32883	42451	15579	38155	29793	40914	65990	16255	17777
76970	80876	10237	39515	79152	74798	39357	09054	73579	92359
37074	65198	44785	68624	98336	84481	97610	78735	46703	98265
83712	06514	30101	78295	54656	85417	43189	60048	72781	72606
20287	56862	69727	94443	64936	08366	27227	05158	50326	59566
74261	32592	86538	27041	65172	85532	07571	80609	39285	65340
64081	49863	08478	96001	18888	14810	70545	89755	59064	07210
05617	75818	47750	67814	29575	10526	66192	44464	27058	40167
26793	74951	95466	74307	13330	42664	85515	20632	05497	33625
65988	72850	48737	54719	52056	01596	03845	35067	03134	70322
27366	42271	44300	73399	21105	03280	73457	43093	05192	48657
56760	10909	98147	34736	33863	95256	12731	66598	50771	83665
72880	43338	93643	58904	59543	23943	11231	83268	65938	81581
77888	38100	03062	58103	47961	83841	25878	23746	55903	44115
28440	07819	21580	51459	47971	29882	13990	29226	23608	15873
63525	94441	77033	12147	51054	49955	58312	76923	96071	05813
47606	93410	16359	89033	89696	47231	64498	31776	05383	39902
52669	45030	96279	14709	52372	87832	02735	50803	72744	88208
16738	60159	07425	62369	07515	82721	37875	71153	21315	00132
59318	11695	45751	15865	74739	05572	32688	20271	65128	11553
12900	71775	29845	60774	91924	21810	38636	33717	67398	82521
75086	23537	49939	33593	13184	97588	28617	17979	70749	35233
99495	51434	29181	09993	38190	42553	68922	52125	91077	40197
26075	31671	45386	36583	93459	48599	52022	41330	60651	91321
13636	93596	23377	51133	95126	61196	42474	45141	46660	42338

Table D.2 Random numbers

	00–04	05–09	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49
50	64219	63661	39652	48646	97306	31741	07294	84149	46797	82487
51	26338	14219	01050	48171	43570	44072	10192	51153	11397	58212
52	03815	00312	78630	33328	13116	69296	91705	86224	29303	57071
53	71897	68373	67359	31014	33510	83018	17056	72306	82919	54600
54	20872	54370	35017	88132	25730	22626	86723	91691	13191	77212
55	31432	96136	89177	73541	31335	21480	77243	76690	42507	81362
56	66890	61305	01210	00660	45373	13568	76082	79172	57913	93448
57	48194	37790	79950	33106	50904	48119	52503	24130	72824	21627
58	11303	87118	81171	32936	48335	28120	49116	44118	04269	27029
59	34374	37323	16917	45356	75371	10363	97191	33798	12693	27928
60	61832	34121	61016	90819	13966	39810	42699	21753	76192	10308
61	16309	20384	09191	91388	97720	89816	30376	76970	23063	35891
62	42507	37065	24526	72602	57359	98131	37292	05967	26002	51915
63	40177	98590	97161	41682	24533	67588	62036	19967	01990	72308
64	82309	76128	93965	26763	24151	04838	40254	26065	07938	76236
65	79788	68243	39732	01257	57884	14743	17520	95101	53811	76099
66	40538	79000	89559	25026	42274	23189	34502	75508	06059	86682
67	64016	73598	18609	73150	42163	33102	45205	87410	96767	67042
68	49767	12691	17903	93871	99721	79109	09125	26904	07419	76013
69	76974	33108	29795	08404	32684	00197	51126	79935	57450	53671
70	23854	08180	85983	96023	50117	64610	99425	62291	86943	21541
71	68973	70531	23098	78033	42573	79818	31778	29553	61446	23037
72	36144	93600	65350	14971	25125	00427	52073	64280	18817	21768
73	03003	87800	07391	11594	22196	00781	32550	57158	58887	73041
74	17340	26188	36647	78386	64358	61463	57842	90382	77019	24210
75	38916	35809	47962	41968	49760	79422	80151	91486	19180	13100
76	61288	19843	69122	42502	48508	28820	59933	72998	99942	10515
77	86809	51561	38046	39418	42915	19000	58050	16899	79952	57819
78	99800	99566	14742	05028	30933	94889	53381	23656	73787	39223
79	92315	31890	95712	08279	91794	91068	49337	88674	35355	12267
80	90363	63162	32215	82279	73256	80834	06088	99162	56705	06118
81	64137	32212	48131	04835	43050	59702	31508	60933	22390	52216
82	91714	53662	28373	31333	33791	74758	51144	18827	10701	76803
83	20902	17616	31391	31459	22315	03544	53743	74701	58851	27127
84	12217	86007	70371	32281	14510	76091	96579	54853	78339	20839
85	15177	02863	42307	33571	25552	74921	17735	42201	80540	51721
86	28325	90811	08804	32716	57913	51577	47525	77705	95350	21866
87	29019	28776	36116	51791	54604	08815	46019	71186	31650	11991
88	81979	81353	56219	67062	25116	82567	33122	14124	46210	92973
89	30371	26347	48513	63915	11158	25363	91915	18131	92978	11591
90	53122	06825	69711	67950	54716	18003	49581	43378	99878	61130
91	67153	35631	89316	41620	52048	70225	47597	33137	31113	51115
92	07291	85353	74819	23145	42377	07202	99515	62282	53809	26685
93	79544	00302	45358	16015	96613	88968	14595	63836	77716	79596
94	64114	85112	82060	16171	24162	39500	87351	36637	42833	71875
95	98919	11883	58310	00012	52402	28210	31075	33272	00810	73268
96	06670	57333	86275	92276	77791	16921	60839	55137	03183	13191
97	36634	93976	52062	83673	41256	60918	18685	48992	19162	96062
98	73101	72891	83745	67106	25010	62107	60885	37503	35161	71213
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